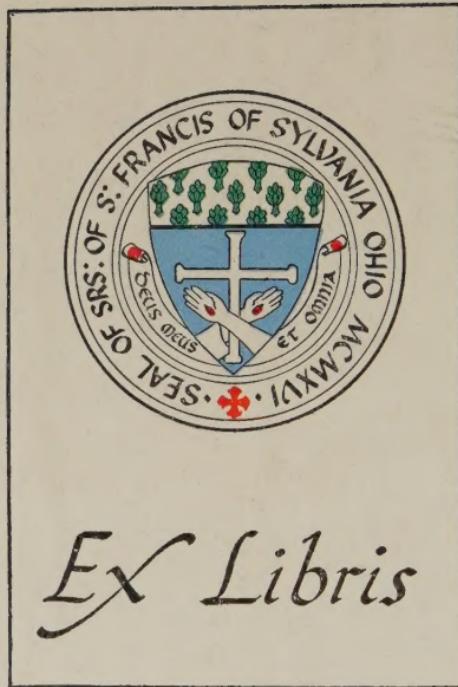


AN INTRODUCTION TO THE
BIRDS OF
PENNSYLVANIA

GEORGE MIKSCH SUTTON





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**AN INTRODUCTION TO THE
BIRDS OF PENNSYLVANIA**



George Miksch Sutton

"When apple trees are white
With their burden of delight."

*Baltimore Orioles (lower, male; upper, female)
in an Adams County Orchard*

AN INTRODUCTION TO THE
**BIRDS OF
PENNSYLVANIA**

BY
GEORGE MIKSCH SUTTON

STATE ORNITHOLOGIST OF PENNSYLVANIA
CHIEF OF BUREAU OF RESEARCH AND INFORMATION
PENNSYLVANIA STATE GAME COMMISSION
MEMBER OF THE AMERICAN ORNITHOLOGISTS' UNION, ETC.

*With a frontispiece in color
and numerous pen-and-ink text-drawings by the author*

1928

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Dedication

MY MOTHER THINKS SHE DOES NOT KNOW MUCH ABOUT BIRDS; BUT SHE KNEW ENOUGH ABOUT THEM TO LET ME BRING THEM, ALIVE, DEAD, OR WORSE THAN DEAD, INTO HER BUSY HOUSEHOLD, AND I THINK SHE IS A GOOD ORNITHOLOGIST.

PREFATORY NOTE

I HAVE written this book for those who are beginning a study of birds in Pennsylvania; or for those who, after some study in a certain region, wish to know more about the birds in other sections of the Commonwealth.

This book is not intended to be a complete reference work. The descriptions of the birds and statements of their status are as brief as I felt I could make them under the circumstances. Many species of birds which have been recorded in Pennsylvania are not even mentioned. These are omitted so as to simplify the list for the beginner, who is confronted with a sufficiently formidable array of new and strange names as it is. All important species are, however, included.

Colored illustrations throughout this hand manual would, of course, have been desirable, but their cost is great, and the pen drawings are adequate for field-work; perhaps, in fact, even better than fully colored drawings which often lead the beginner to expect too much from the glimpses he may have of birds in the field.

Throughout the manual I have attempted to stress the points which are of importance to the field student, and have tried to eliminate material which might lead to confusion.

Thorough, detailed works on Pennsylvania birds are needed. Such volumes, one on western Pennsylvania, by W. E. Clyde Todd, of the Carnegie Museum, Pittsburgh, and one on eastern Pennsylvania, by Dr. Witmer Stone, of the Philadelphia Academy of Arts and Sciences, are in the making now. But it may be years before these completed volumes are ready for distribution, and in the meantime our budding ornithologists are carrying on their studies handicapped by a lack of any sort of reference work which is up-to-date, understandable, simple and local in its treatment, and within reach of those of average means. This volume has been prepared to meet this need.

PREFATORY NOTE

It is hoped that the ornithological notes of those who use this manual may be so conscientiously written and so carefully kept that they will be of value in the final preparation of the larger, more exhaustive works which are to follow.

I have a suggestion to make to those who would like to make this volume more attractive and somewhat personal in character. Why not, as certain birds are identified, color in the pen-and-ink drawings with water-color or crayon so that they will greet the eye in color as the pages are turned? The paper used is such that colors may be applied with safety, if care be exercised. Children, in particular, will greatly enjoy this feature of their bird-study work. Teachers who like to combine elementary art work with nature study will welcome such a suggestion. A book which has, in a sense, been thus personally illustrated, becomes invaluable to the owner.

I should like to extend a word of gratitude to the following people who have helped me in the preparation of this volume: Captain George Finlay Simmons, of the Cleveland Museum of Natural History; Mr. Wharton Huber, of the Philadelphia Academy of Natural Sciences; Mr. Robert McFarland, of the Mount Pleasant Press, Harrisburg; Miss Evangel Sutton, my sister; Mr. Leo A. Luttringer, Jr., my assistant; and Miss Effie Riemensnyder, of Harrisburg.

HARRISBURG, PA.

July 29, 1928.

GEORGE MIKSCH SUTTON

CONTENTS

	PAGE
Introductory	
A Word to the Beginner	1
Bird-Songs	2
Note-Books	3
Specimens	3
Field-Glasses	3
Books	4
Magazines	4
Bird Hikes	5
In the Field	5
Value of Pennsylvania Birds	6
Helping Our Bird Friends	7
Life-Zones in Pennsylvania	8
Bird-Migration in Pennsylvania	9
 List of Species	 11
 Index of Bird Names	 163

AN INTRODUCTION TO THE BIRDS OF PENNSYLVANIA

A WORD TO THE BEGINNER

As you glance over the pages of this book you may say to yourself, "I can never learn all of these birds." This is a natural attitude of mind upon the part of one to whom many bird-names are new and who feels that he doesn't know much about birds.

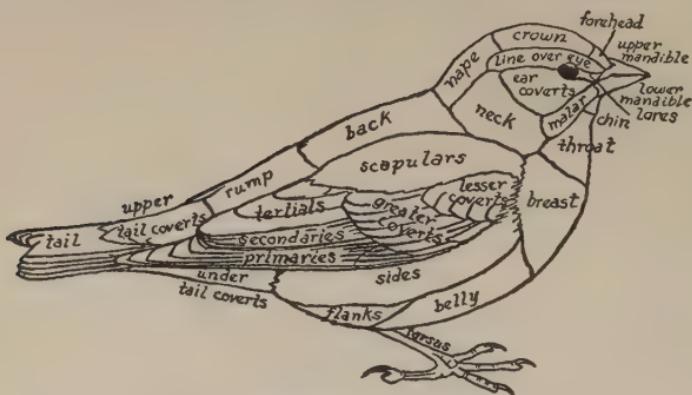
It may be reassuring to you to learn that most people know more about birds than they realize. Already your mind is full of common bird-names. You wouldn't be reading this book had you not already learned a good deal about some birds.

Here is a bit of good advice. Instead of taking this book to the field with you in the hope that you may accurately identify every bird you see, suppose you choose eight or ten birds which you do not know, but about which you wish to learn, and concentrate upon these. You already know the Bluebird, the Robin, the Crow. Suppose you try now the Wood Thrush, the Towhee, the Meadowlark. Look these up in the book, find out whether you may expect to see them at the time you are to make your trip of discovery, learn where to look for them, what to look for when they appear, something about what they will say as they call or sing—and fasten these facts in your mind. If you adopt this procedure, you will not be misled into identifying some bird of the deep woods as a Meadowlark, or a bird of the open field as a Wood Thrush. Some birds will puzzle you, of course, but as you continue your study these problems will be solved.

As a serious bird student you will, first of all, want to be able to describe a bird accurately, using some acceptable scientific terms. Some of these will be new to you, but they will all become understandable in a short time. On the next page is a chart showing the names of the bird's parts. You should become so familiar with these words that they will not confuse you.

Many books give complete color keys which are to help the beginner. I do not believe much in these, because I have always found them tedious and difficult. I believe that good sketches obviate much of the need of such keys.

In making your studies be careful not to expect to find birds during seasons when they do not normally occur. On



Topography of a Bird

the other hand, if you identify a bird at a time which is not indicated in this manual, special note should be made, for pioneer records such as these are valuable to the author who wants to gather together all data, and the last word has not yet been said upon all the movements of even our commonest species.

BIRD-SONGS

It is my belief that but few people altogether lack a sense of tune. Some of my students at the University of Pittsburgh had difficulty, I remember, in diagramming bird-songs; but with a little practice you will be able to jot down syllables which will help you to recall bird-songs. The well-known names *Chickadee*, *Phæbe*, and *Killdeer* are all permanent records of this very sort of syllabization of bird-songs—an attempt to write down what the bird is saying. Sometimes a bird will be heard again and again before it is seen. If my notes concerning songs are at all accurate, some of these will help you to find birds which you might have difficulty in identifying from appearance alone.

NOTE-BOOKS

Write down all sorts of notes, be they ever so incomplete. Make sketches of birds as you see them; diagram the songs and call-notes. Keep all that you write as accurate and free from imagination as possible. Do not accredit a bird with certain colors until you see them.

A note-book may take the form of a diary wherein is stated the temperature of the day, the weather conditions, the length and route of your field-trip, and the birds which you saw, together with notes upon them. Or, your system may be more elaborate, with a separate sheet for each species whereon you put all the data which you accumulate, more or less, perforce, in chronological order. The principal point to remember is that notes should be written while they are fresh in the mind, on the spot, if possible, to avoid inaccuracies.

SPECIMENS

Only a few ornithologists can have a complete collection of birds for reference. Everyone can save feathers of birds, or old nests, however, and when birds are found dead, they may be saved as specimens, if a permit for holding them is requested from the State Game Commission. When I was a lad I saved feathers which I found in the woods and had a large collection of these. Some of them, I later found, were all that were needed in authenticating a good record.

You will find it helpful to visit a good museum occasionally, so as to have a close view of the birds you have been reading about, or studying under difficulty, in the field. Here you will see clearly the color patterns, the anatomical characteristics, and the actual size of the birds that have puzzled you.

FIELD-GLASSES

A good binocular, preferably one which magnifies about six times, is a great aid to the amateur. The field of the glass, its illumination, ease of adjustment, and such points should be investigated before the purchase is made. A well-made glass with good lenses is probably the best in the long run, even though it be more expensive. Glasses should be handled carefully. They should have a good carrying-case, and should not be left lying in the sun nor exposed to the rain.

BOOKS

Many excellent standard works upon birds are available. When I was a youngster I wore out three volumes of Dr. Frank M. Chapman's *Bird-Life*; I devoured the reading matter, cut up the pictures, and studied the technique of the artist who had painted them. By the time I had destroyed the third copy of this helpful volume, I knew the birds treated there pretty well. Chapman's *Handbook of Birds of Eastern North America* is a desk-side companion today. The little pocket volumes called *Bird Guides*, by C. A. Reed, are helpful; but the color-plates in them have been used so many times that they are worn out, with the result that the colors are often very misleading. Dr. B. H. Warren's volumes on the *Birds of Pennsylvania*, published in 1888 and 1890, contain much of value and interest, including a series of colored pictures which always elicit praise. These volumes, while interesting historically, do not meet the needs of the Pennsylvania bird student today, in the light of present knowledge. The excellent state publications *Birds of New York* (Eaton) and *Birds of Massachusetts* (Forbush), are magnificently illustrated and are well worth possessing; they treat of many of the species found in Pennsylvania. Books on general aspects of ornithology which you will find useful are: Wetmore's *The Migrations of Birds*, Ball's *Bird Biographies*, Blanchan's *Bird Neighbors* and *Birds That Hunt and Are Hunted*, Chapman's *What Bird is That?*, Coues' *Key to North American Birds*, the National Geographic Society's *Book of Birds*, and Forbush's *Useful Birds and Their Protection*.

MAGAZINES

The proceedings of the Delaware Valley Ornithological Society, published under the title *Cassinia*, contain a wealth of material interesting to the Pennsylvania student. *The Cardinal*, journal of the Audubon Society of the Sewickley Valley, and a well-edited periodical, contains articles of interest chiefly to workers in western Pennsylvania; *The Auk*, *The Wilson Bulletin*, *Bird-Lore*, *The Oologist*, *The Condor* (western), and *Nature Magazine*, all are likely to contain articles of interest to Pennsylvania bird students.

BIRD HIKES

Early-morning hikes are good, but activity among birds is high, as a rule, until 10 o'clock A.M., or later, so you need not be in haste to get out at 4 o'clock, unless you have to go far. The trained bird student so comes to depend upon songs that he stays out as long as the birds are singing. Windy days are poor, because the birds are shy. In gentle rains, birds will often be very active and tame. Toward evening, birds often become active and vociferous again. Only a few of our birds sing during the heat of the midsummer noon.

IN THE FIELD

Winter is an ideal time to begin bird-study, because there are no leaves and because the birds are few and not difficult to identify. If you learn the winter birds thoroughly, you will be ready for the rush of the spring as old favorites return and new friends appear.

Midsummer is often a disappointing season because birds are silent and in poor feather. At this time you will be able to study the plumages of the young birds, however, and you will find much of interest in watching the affairs of family life. Migrant shore-birds should be watched during late summer.

Fall is the season of trials. Now come the restless, sombre-colored hordes, most of them silent save for a few brief call-notes. When you can easily identify all the fall birds, you are a pretty good ornithologist.

In approaching a bird, common sense will warn you that you should be as quiet as possible. You should be obscurely dressed, and if you can go under, around, or between bushes, rather than through them, you will cause less disturbance. Often the best way to study birds is to find a pleasant, somewhat hidden spot and remain there for an hour, watching all that comes by. A good bird student, in the course of his walk, will try to visit as many different kinds of country as he can; he will visit the ponds and marshes, the grape-vine thickets, the open fields, and the hemlock woods of his neighborhood. He knows that in these different regions he is likely to find different birds. In fact, unless he does carefully study *all*

of these regions, he is not thoroughly studying the bird-life of his locality.

You may have trouble in seeing some birds, though you pursue them ever so tirelessly. Try kissing the back of your hand in such a manner as to imitate the cries of a young or wounded bird. This sound will often arouse the curiosity of the wariest bird and he will come close. I thus made a squeaking sound once and a Robin hit me with full force on the neck; she was so convinced that I had one of her young in my dreaded clutches that she gave stern battle! These squeaking cries sometimes draw even the birds of prey.

VALUE OF PENNSYLVANIA BIRDS

Birds are of great value from the economic standpoint. The insects, destructive mammals and reptiles, and weed-seeds which they destroy are all enemies of man. It is amazing that in the scheme of nature certain birds should patrol the air, others the fields, others the trees, others the forest-floor, and so on, so that all outdoors is, in a sense, cared for by our feathered friends. It has been said that our very existence depends upon these birds who make it possible for the trees, the flowers, and the grain-fields to grow. And all the while these same creatures are delighting us with their beautiful colors and their cheerful songs.

Game-birds are important in Pennsylvania, with 700,000 hunters faring forth each fall. In addition to our popular game-birds, the Bob-White, Wild Turkey, and Ruffed Grouse, the Game Commission has introduced the Ring-necked Pheasant and Hungarian Partridge. These foreigners relieve the burden of shooting from our native game.

From the economic standpoint only a few birds in Pennsylvania may be said to be thoroughly undesirable. The Goshawk is a savage destroyer of small game and poultry. His smaller cousins, the Sharp-shinned Hawk and Cooper's Hawk, are killers. The Great Horned Owl is destructive at times. Other hawks and owls, the Crow, Kingfisher, Starling, and other species have some destructive or undesirable traits, but they are not altogether bad.

Our valuable song and insectivorous birds have been

protected since 1858. Certain migratory birds, such as the loons, grebes, herons, and gulls, have been protected since 1900 by the International Bird Treaty with Canada. Today we protect one admittedly destructive bird—the Raven, because it is so rare and because of its fame in literary circles.

HELPING OUR BIRD FRIENDS

We may encourage birds to live about us, if we bear in mind their needs. In winter we may feed the Chickadees, Cardinals, Downy Woodpeckers, and other birds which live in our neighborhood. We may tack pieces of suet on a sheltered branch and scatter grain and grit on "feeding counters." When snow is on the ground the birds have considerable difficulty in getting enough food, and our assistance will sometimes keep them from starvation. Feeding-shelters may be very simple, or they may be elaborate, but they should be placed and built so as to serve the needs of the birds best. A feeding-shelf built at a window furnishes a very attractive and useful device.

Before spring is upon us we should erect nesting-boxes for the Purple Martins, Bluebirds, and House Wrens we wish to attract. Those who are interested in securing specifications for these boxes should write to the Game Commission at Harrisburg for their bulletin, "A Year's Program for Bird Protection."

In spring we should think of the trees or shrubs which will attract birds. A fruit-laden mulberry tree always attracts birds in midsummer. Thick bushes placed in clumps will almost surely lure nesting Catbirds or Chipping Sparrows; a trumpet vine will mean Hummingbirds!

In midsummer the birds' bath must be arranged. Such a bath may be very simple. But it must not be deep, and the edges should slope into the deeper water gradually. Remember that the water should be changed frequently unless a running stream is provided.

House cats and birds do not thrive together as a rule. If you wish to make conditions as nearly ideal as possible for your bird friends, you had better not keep a cat, for these animals are, by nature, crafty and bloodthirsty, and they

will catch birds for "sport," even though they are well fed.

If you carefully watch the birds, you will become aware of their needs. You may find it necessary to shoot Starlings occasionally if they persist in ousting Flickers from their nests. You may have to plant sunflowers to attract Gold-finches; you may find it desirable to allow part of your property to grow up into weeds and bushes so that it may furnish a home for some unusual bird neighbor. At my home at Bethany, West Virginia, we have permitted raspberry vines to grow on a hillside back of the house, and here Indigo Buntings nest, within a few rods of the open windows!

LIFE-ZONES IN PENNSYLVANIA

The term *Life-Zone* is used by scientists in referring to a region where environmental conditions so react upon each other as to form a suitable home for certain plant and animal forms. A Life-Zone naturally has no hard and fast boundaries as does a geographical zone; its boundaries are determined by temperature, rainfall, soil, altitude, drainage, and innumerable other factors, which so create a certain average whole as to attract certain species of plants, birds, mammals, and so forth, which in turn themselves become part of the environment, and are responsible for the presence of certain forms. These Life-Zones are, then, associations which naturally develop in sections where similar conditions exist. In Pennsylvania there are three or four of these associations. One, noticeable in the southern and southwestern counties, has been called the Carolinian Life-Zone. Here such birds as the Carolina Wren, Cardinal, Tufted Tit, and Red-bellied Wood-pecker live. In much of Pennsylvania the Alleghenian Life-Zone occurs, where the Least Flycatcher, Wilson's Thrush, Swamp Sparrow, and Rose-breasted Grosbeak are to be found in summer. Higher in the mountains is the Canadian Life-Zone; here the Junco, Hermit Thrush, Red-breasted Nuthatch, Wilson's Snipe, and Northern Water Thrush nest. As you read this book, you will notice that many birds are to be found in *northern or mountainous counties*; others in *southern or less mountainous counties*, and so forth. This is an indication of Life-Zone distribution.

BIRD-MIGRATION IN PENNSYLVANIA

Some of our winter birds spend the year round in one region. Certain of them, like the Song Sparrow and Crow, migrate to an extent, the nesting individuals moving southward during winter, their place being taken by other individuals of the same species from farther north. Some winter birds, such as the Junco, Golden-crowned Kinglet, Brown Creeper, and Tree Sparrow, visit us from the north and return to their Canadian nesting-ground with the arrival of spring. Most of our familiar summer birds spend the winter to the southward, many of them in South America. They come to us for a few months each year for the sole purpose of bringing forth their young. Many species of birds pass through Pennsylvania en route from their home in the south to their nest-ing-grounds in the north, and back again in the fall.

By far the greater number of species migrate to an extent. The phenomenon of bird-migration has caused many a student to wonder. How did such a tremendous annual movement originate? How do the birds endure their great flights across bodies of water?

The probability is that the migration of birds developed in past centuries as the food-supply in the tropics became insufficient for all the nesting birds which tried to bring forth their young there. Urged by the need for solitude and a good food-supply, certain birds pushed out from the ancestral range and established a new summer home. After the young were reared, instinct drew them back to the region which was familiar to them, and so great migration routes have developed. Today the tiny Ruby-throated Hummingbird rears his young in our woodlands, then returns to South America with the young birds. Our Yellow Warbler, Red-eyed Vireo, Purple Martin, Rose-breasted Grosbeak, Scarlet Tanager, and many others, all go to South America.

Food-conditions, no doubt, have something to do with migration movements. Birds are well clothed with feathers, to be sure, but many of them depend on an insect diet, such as would be difficult to secure during cold winters. Some of our birds actually do not migrate if a food-supply is available.

Most of the smaller birds migrate at night, following

streams or mountain ranges. Swallows and hawks usually migrate by day, ducks and geese by both day and night. The Ohio, Delaware, and Susquehanna river valleys are important routes of migration. The shore of Lake Erie is a resting-ground for birds which have flown over this large body of water. In fall, at Presque Isle, the trees may be alive with birds which have just made the flight. The Atlantic Coast is an important route of migration for many water-birds. Since Pennsylvania has no salt-water shore-line, we do not find some species which are to be found along the coast of New Jersey and Delaware.

Many birds which occur in abundance at Erie, in fall, rest there until they are able to take another flight; then they start southward for a feeding or resting-ground south of Pennsylvania, and therefore skip over most of the Commonwealth.

The distribution of birds and the constancy of their migration routes is a source of much wonder to all of us. Why should the two Palm Warblers, for instance, so invariably be found each year, one to the eastward, one to the westward of the mountains? Why should some birds be here in fall and not in spring? Why should others be so variable in numbers? If you keep careful notes upon the migratory birds, you may eventually help to solve some of these problems.

LIST OF SPECIES

HORNED GREBE

Colymbus auritus Linnæus

OTHER NAMES.—Dipper; Hell-Diver.

DESCRIPTION.—Neck long; no tail-feathers; toes flat and broad, feet at rear of body; sexes similar. *Adult in spring*: Large, puffy head, black, with stripe and silken plumes behind eye buffy; plumage of back blackish edged with gray; secondaries white; neck, breast, and sides chestnut; belly silvery white; eyes bright pink, the pupil encircled with a white ring. *Immature birds and adults in winter*: Grayish black above, silvery white beneath, grayish on the throat, with white cheek-patches which nearly meet on nape. *Length*: 13½ inches.

RANGE IN PENNSYLVANIA.—A migrant throughout the Commonwealth from March 20 to May 10 and from October 1 to November 30; occasional in winter when water is free of ice.

The white on the sides of the head and the white wing-patches distinguish this species in winter plumage from the Pied-billed Grebe; the gay spring plumage of the Horned Grebe is unmistakable. Look for this bright-eyed diver along the larger waterways. Its ability in swimming under water causes it to evade its enemies by disappearing beneath the surface rather than by flying. Grebes have the interesting habit of swallowing their own feathers as they moult, or as they pluck them out.

Holbœll's Grebe (*Colymbus holbællii*), a much larger bird, is very rare in Pennsylvania. In spring plumage it has a red-brown neck. It is about twice as large as either the Horned or Pied-billed Grebe and has a proportionately heavier and larger bill.

PIED-BILLED GREBE

Podilymbus podiceps podiceps (Linnæus)

OTHER NAMES.—Dabchick; Hell-Diver; Dipper; Dipper-Duck (erroneous).

DESCRIPTION.—Sexes similar. *Adults in summer*: Glossy, dark brown above; throat black; neck, breast, and sides grayish, washed with brownish and indistinctly mottled with blackish; lower breast and belly glossy white; black band across bill. *Immature birds and adults in winter*: Similar, but without black on throat and bill. *Length*: 13½ inches.

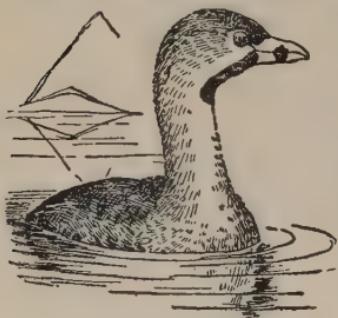
RANGE IN PENNSYLVANIA.—Rare as a summer resident, chiefly because



Horned Grebe, Winter Plumage

there are so few lakes and marshes suited to its nesting; fairly common as a migrant from April 1 to May 15 and from August 25 to October 30.

NEST.—Flat, composed of decaying vegetation, floating among water-weeds or anchored by plants which are attached to the bottom. *Eggs:* 4 to 7, dull white, usually so heavily stained as to be brownish in appearance.



Pied-billed Grebe, Breeding Plumage

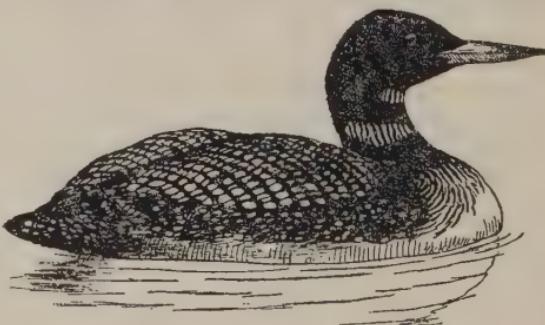
the unmarked wings distinguish this species from the Horned Grebe. The Pied-billed Grebe will frequently be seen along smaller streams and in little ponds.

LOON

Gavia immer immer (Brünnich)

OTHER NAMES.—Great Northern Diver; Loom.

DESCRIPTION.—Size large; bill long and sharp; tail very short, with legs sticking out behind. *Adults in spring:* Upperparts black, with bluish and greenish reflections; patches on throat and sides of neck streaked with white; back and wings marked regularly with rows of white squares; underparts silvery white; sides black, spotted finely with white; eyes red. *Immature birds and adults in winter:* Upperparts blackish, margined with gray and without white spots; throat and neck grayish; underparts white. *Length:* about 30 inches.



Loon, Breeding Plumage

RANGE IN PENNSYLVANIA.—A fairly common migrant along the larger lakes and waterways from March 15 to May 10 and from October 1 to December 15; occasional in winter when the water is free of ice.

The Loon is at perfect ease in the water; on land it shuffles along, using its wings as feet, and it cannot rise in flight from the ground. It lives almost altogether on fish which it captures under water and swallows entire. As a rule, it is to be seen far out from shore, floating quietly. Easily it slips under the water, perhaps to reappear a

hundred yards or more from the point at which it went down. The weird, laughing cry, which is famous in literature, is not often heard in Pennsylvania, since the birds do not nest here.

In the hand, the Loon is easily recognized by its striking coloration in spring; or in winter by its long, sharp bill and its large, webbed feet; at a distance, in the water, it may be confused with a cormorant, which has a hooked bill and a rather long tail, or with some of the larger ducks which have shorter, more stubby bills.

The smaller Red-throated Loon (*Gavia stellata*), usually a rare bird in Pennsylvania, is found during winter or early spring. In winter the back is gray, *flecked with white*; in spring there is a triangular patch of red-brown on the lower throat; it is always white below.

HERRING GULL

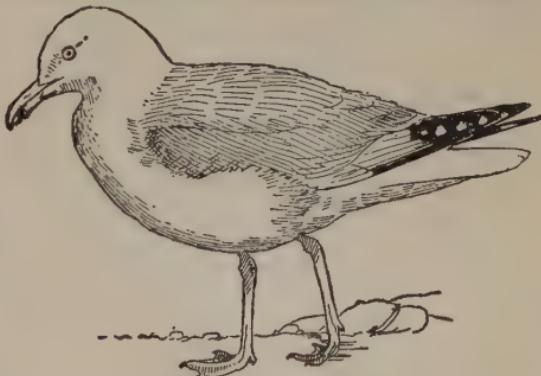
Larus argentatus argentatus Pontoppidan

OTHER NAMES.—Sea Gull; Gray Gull.

DESCRIPTION.—Sexes similar. *Adults in summer*: White, with pearl-gray back and wings; tips of wings black with white spots; bill yellow with orange spot near tip of lower mandible; feet pale pink; eyes pale yellow. *Adults in winter*: Similar, with gray spots on head and neck. *Immature birds*: Dark gray-brown at a distance, with blackish bill and dark brown eyes; in the hand the upper-parts are found to be dark gray, considerably marked with buffy. The acquiring of fully adult plumage requires several moults. Birds which are not fully adult may have black-tipped, white tails. Young in their first flight plumage are darker than older individuals. Length: 24 inches.

RANGE IN PENNSYLVANIA.—A somewhat irregular migrant and winter resident throughout, save at Erie, where it is common during summer, though it does not, apparently, nest there. In the interior it appears in spring as soon as the ice breaks up and is usually noted along the larger waterways.

Large gulls seen in Pennsylvania are usually of this species. Their long wings and graceful flight mark them at great distance. The smaller Ring-billed Gull, which is not easy to distinguish from this species in the field, has greenish yellow feet and a black band across the bill. Herring Gulls are often abundant about the harbor at Erie.



Herring Gull, Breeding Plumage

RING-BILLED GULL

Larus delawarensis Ord

DESCRIPTION.—Sexes similar. *Adults in summer:* Like the Herring Gull, but much smaller, with greenish yellow bill crossed near tip by black band, and with greenish yellow feet. In winter the head and neck are spotted with gray. *Immature:* Gray-brown; tail white, with black band near tip; end of bill black. *Length:* 18 inches.

RANGE IN PENNSYLVANIA.—An irregular migrant in February, March, and April, and in October and November, sometimes appearing in flocks; occasional in winter.

The Ring-billed Gull should be identified in the field with a glass. It is much like the Herring Gull in general appearance, and, unless it be compared directly with the larger bird, may pass undetected. Remember the yellowish feet and the black band across the bill.

BONAPARTE'S GULL

Chroicocephalus philadelphia (Ord)

DESCRIPTION.—Size small; sexes similar. *Adults in summer:* White, with rosy flush on belly, head black with white spot at eye, pearl-gray mantle, and black-tipped wings. Adults in winter lack the rosy flush of the underparts and have white heads upon the back of which are two dusky spots. Immature birds are similar to adults in winter but have a black band near the tip of the tail. *Length:* 14 inches.

RANGE IN PENNSYLVANIA.—A fairly regular migrant along the waterways from about April 1 to May 10 (sometimes considerably later) and from September 1 to October 10. Not often seen in winter.

This, the smallest of our gulls, is often seen in flocks. At Conneaut Lake, Crawford County, where they are regular visitors, they circle about rapidly, like terns, resting on the water at intervals or standing on a floating timber. Their black heads distinguish them easily from all other species save the Laughing Gull (*Chroicocephalus atricilla megalopterus*) a larger species which nests along the Atlantic Coast, and which may occur occasionally along the waterways of the southeastern part of the Commonwealth.

COMMON TERN

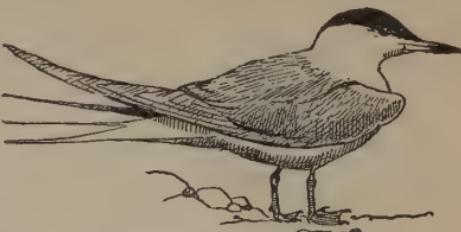
Sterna hirundo Linneaus

OTHER NAMES.—Sea Swallow; Striker; Wilson's Tern.

DESCRIPTION.—Smaller than a gull, with long, deeply forked tail. *Adults in summer:* Top of head glossy black; rest of body pearl-gray, save throat, sides of head, and tail, which are white, the outer tail-feathers with outer webs pearl-gray; bill red, with black tip; feet orange-red. *Adults in winter:* Similar, but with forepart of head and underparts white, and bill blackish. *Immature:* Similar to adults in winter, but plumage considerably washed with brownish, lesser wing-coverts slaty, and tail short, though forked. *Length:* 15 inches.

RANGE IN PENNSYLVANIA.—A rather irregular migrant.

The more rapid flight, long forked tail, and habit of pointing the bill downward, rather than forward, while flying, distinguish the terns from the gulls. Common Terns are sometimes seen flying gracefully about a small pond, seeking small fish or aquatic insects, which they capture with great dexterity. During migration they are usually silent, and they do not often remain long in one locality.



Common Tern, Adult

The much larger Caspian Tern (*Hydroprogne caspia imperator*) is similar in color-pattern to the Common Tern but has a much heavier, red bill, and a short, though forked tail. This species, which is decidedly rare as a migrant in the interior, has established a small nesting colony near Erie. The Caspian Tern is 21 inches long.

BLACK TERN

Chlidonias nigra surinamensis (Gmelin)

OTHER NAME.—Marsh Tern.

DESCRIPTION.—Size small; tail short, forked. *Adults in summer:* Head and underparts black, save under tail-coverts, which are white; upperparts gray; bill and feet red. *Adults in winter and immature:* White, with pearl-gray back and wings and dusky spots on head; bill and feet dusky. Length: 10 inches.



Black Tern, Adult

RANGE IN PENNSYLVANIA.—Irregular as a migrant throughout the Commonwealth; more frequently seen than other Terns about marshes and on small bodies of water; usually seen between April 25 and September 30. Though it is thus to be seen in midsummer irregularly, it is not known to nest in Pennsylvania at the present time.

The adult Black Tern, as it courses about a marsh or pond, is a beautiful, buoyant creature. Its flight is swallow-like. It is probable that this species nests occasionally along the Lake Erie shore, or at some of the larger lakes wherever there are marshy shores.

DOUBLE-CRESTED CORMORANT

Phalacrocorax auritus auritus (Lesson)

OTHER NAME.—Shag.

DESCRIPTION.—Four toes all webbed together; bill long and strongly hooked at tip; tail stiff and moderately long; plumage thick and firm.

Adults in breeding plumage: Glossy greenish black, save on back which is dark gray, each feather being margined with lighter gray; two filamentous tufts of black feathers on back of head; neck with thin sprinkling of silken white feathers during period of courtship; bill blackish, marked at base with dull yellow; sack under bill yellow; eyes bright green. *Immature and adult in winter* (the plumage usually seen in Pennsylvania): Without crests, and whole plumage brownish black, somewhat mottled beneath, and with light area on throat; eyes grayish green, not bright green. *Length:* About 30 inches.



Double-crested Cormorant
Breeding Plumage

RANGE IN PENNSYLVANIA.—A migrant found principally along the larger water-ways from about March 20 to May 10 and from September 15 to November 15. It is occasionally seen in winter when the water is free of ice.

Cormorants sit low in the water so that, while swimming, their tails do not show as field-marks, but their long necks, large heads, and the strongly hooked bills distinguish them at a considerable distance. In flight their wings beat regularly.

The bulky, wide-winged White Pelican (*Pelecanus erythrorhynchos*) is occasionally noted as a straggler in Pennsylvania. It is white, with black wing-tips, and is so noticeably equipped with long bill and throat-pouch that it can hardly be confused with any other species. Its four toes are all webbed together, as in the Double-crested Cormorant. Additional records of this species are desirable.

MERGANSER

Mergus merganser americanus Cassin

OTHER NAMES.—Shelldrake; Goosander; Fish Duck; Sawbill; American Merganser.

DESCRIPTION.—One of the largest of the ducks; bill long and narrow, with teeth on both mandibles. *Adult male:* Head and upper neck greenish black; lower neck, patches in wings, and underparts white; belly suffused with salmon-pink, noticeable in some individuals; back, shoulders, and wings black; rump and tail gray; bill and feet red; eyes bright red. *Adult female:* Head, with two large crests, and neck rich brown, marked with white areas in front of eye and on chin and upper throat; upperparts ashy gray; patch in wings, and breast and belly white. *Length:* 25 inches.



American Merganser, Male

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant along the larger waterways and sometimes on the smaller streams from about March 15 to April 20 and from October 1 to December 1. It frequently occurs in winter when the water is free of ice. ¶

The mergansers are all expert fishermen and like to fish in swift water. They dive easily and their serrate bills help them to hold their slippery prey.

The female Merganser is difficult to distinguish from the female Red-breasted Merganser; in the present species, however, the white area on the chin and upper throat is sharply defined, whereas in the Red-breasted species the chin and throat are *not* white, but of a brownish color, paler than the rest of the head.

RED-BREASTED MERGANSER

Mergus serrator Linnaeus

OTHER NAMES.—Shelldrake; Fish Duck; Sawbill.

DESCRIPTION.—Male, with long, graceful crest of fine feathers; female with double crest, as in the female Merganser. *Male:* Head and upper neck glossy greenish black; lower neck, patch on upper chest, patches on wing, and underparts white; back black; rump and tail grayish; breast reddish brown, mottled with black, and on sides marked with a striking double row of black and white feathers; sides finely barred with blackish; legs, feet, and eyes red. *Female:* Head and neck rufous brown, grayish on crown and crest; throat not white, but of paler brown than rest of head; back grayish, washed with brown; underparts white, sides marked with brown; bill and feet brownish; base of lower mandible reddish; eyes, brown. *Length:* 22 inches.

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant, principally along the larger waterways, appearing somewhat later in spring than the preceding species and disappearing earlier in the fall.

It is said that the Red-breasted Merganser is less frequently seen along the smaller streams than is the larger Merganser. Both species eat fish and therefore are not considered as of much value for food.

HOODED MERGANSER

Lophodytes cucullatus (Linnaeus)

OTHER NAMES.—Shelldrake; Fish Duck.

DESCRIPTION.—Bill long and narrow, with teeth on both mandibles. *Male:* Head, neck, back, and tail black; a high, fan-shaped crest on head strikingly marked with white; speculum white; sides rufous, finely barred



Red-breasted Merganser, Male

with black; breast and belly white; eyes bright yellow. *Female*: Dull brown, somewhat brighter on the thin crest, and grayer on head and neck; upper throat, belly, and speculum white; eyes brown. *Length*: 18 inches.



Hooded Merganser, Male

is one of our most striking birds and cannot easily be confused with any other species. The Hooded Merganser may be found along a quiet stretch of a small stream where the handsome males, at rest, do not display their high crests. In such mood the head has much the appearance of that of the other species of Fish Duck—thin, long, and snake-like. When rising, the birds beat their wings with amazing rapidity, the white speculum in the wings flickering brilliantly. This species is not so often found in swift water as are the Merganser and Red-breasted Merganser.

The male Hooded Merganser

MALLARD

Anas platyrhynchos platyrhynchos Linnæus

OTHER NAMES.—Gray Mallard; Wild Duck.

DESCRIPTION.—*Male*: Head and neck rich glossy green, with violet reflections; neck with striking white collar; back and wings gray; speculum violet, bordered with black and white; rump, and upper and under tail-coverts black; tail feathers whitish; breast rich glossy chestnut; sides gray, finely barred; belly white; bill yellow; feet bright pink. *Female*: Mottled and streaked all over with grayish brown; speculum as in male; bill dull greenish yellow; feet dull pink. *Length*: 23 inches.

RANGE IN PENNSYLVANIA.—Common and regular as a migrant from March 1 to May 20 and from October 1 to December 15; nests locally and uncommonly, chiefly in swampy regions or along small upgrown streams.

NEST.—Built in a depression under a bush or in high grass, usually near the water, and lined with down. *Eggs*: 6 to 15, pale greenish buff. Duck eggs are usually glossy in appearance.

The Mallard, best known of our ducks, is the ancestor of several domestic strains of water-fowl. It is usually found in flocks along



Mallard, Male

the shallow margins of streams, where it procures its food by nibbling along the bottom while its tail protrudes from the water.

The white tail and red feet of the male, which contrast with the gray of the back and wings, are good field-marks as the flock hurriedly rises and makes away.

BLACK DUCK

Anas rubripes tristis Brewster

OTHER NAMES.—Black Mallard; Dusky Mallard.

DESCRIPTION.—Sexes similar; general appearance dark brown, darkest on top of head and on back, all feathers margined with brownish buff; cheeks buffy, streaked with black; speculum rich violet, bordered with black, and, at tips of feathers, with white; under-wing plumage white; bill greenish; feet dusky in Black Duck; bright red in the Red-legged Black Duck. Length: 22 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant from March 1 to May 10 and from October 1 to December 25; uncommon and local as a summer resident, chiefly near lakes or quiet stretches in streams. Nest and eggs like those of the Mallard.



Black Duck, Male

Two forms of the Black Duck occur in Pennsylvania: The smaller, duller Black Duck as a migrant occurs at about the same time as the Mallard and nests locally. The Red-legged Black Duck (*Anas rubripes rubripes*), a summer bird of Labrador, comes south later in the fall, and has been known even to occur in the northern part of the State in late December, so there is a probability that this form occasionally winters when the water is free of ice.

Both the Mallard and Black Duck quack loudly, like domestic ducks, particularly when they are surprised. Large, dark-colored ducks which show white under the wings as they fly off are likely to be Black Ducks.

GADWALL

Chaulelasmus streperus (Linnaeus)

OTHER NAME.—Gray Duck.

DESCRIPTION.—Smaller than Mallard. *Male:* Top of head with low, fluffy crest, mottled with rufous and black; sides of head and neck buffy, streaked and spotted with black; breast and lower neck black, each feather with a central spot and border of white which gives a remarkably beautiful scaled appearance; back gray-brown; rump and upper and under tail-coverts black; breast and belly whitish; sides finely barred with blackish,

lesser wing-coverts chestnut; speculum white; feet yellow. *Female:* Similar but duller, and with chest and sides buffy, thickly spotted with blackish; underparts white, more or less spotted with black, and with little or no chestnut on the lesser wing-coverts. *Length:* 20 inches.



Gadwall, Male

RANGE IN PENNSYLVANIA.—A rare and irregular migrant from about March 10 to April 30 and from September 25 to October 30. This is one of our rarer ducks.

I have found the yellow feet of this species to be a fairly good field-mark, but in the swimming birds the white speculum, though it be nearly covered by the flank-feathers,

is a reliable feature. Gadwalls feed in shallow water, as do their close relatives, the Black Duck and Mallard, and they often feed at night. Definite records of this species in Pennsylvania are desirable.

BALDPATE

Mareca americana (Gmelin)

OTHER NAMES.—Widgeon; American Widgeon.

DESCRIPTION.—*Male:* Top of head white or buffy; sides of crown back of eye glossy green, spotted with black; rest of head buffy, finely streaked and spotted with black; breast and sides pinkish brown, the sides finely and thickly barred with black; belly white; back gray-brown, finely barred black; bill blue-gray. *Female:* Head and neck pale buffy, finely streaked with black; breast and sides dull pinkish brown, washed with grayish; belly white; back grayish brown, barred irregularly with buffy; greater wing-coverts brownish gray, their outer webs mostly or entirely white, their tips black, sometimes edged with white; greater under wing-coverts white. *Length:* 19 inches.

RANGE IN PENNSYLVANIA.—Rather common as a migrant from March 1 to August 15 and from October 1 to November 1, sometimes abundant, particularly along the larger streams.

The white crown-patch of the male Baldpate not only has given this bird its name but also furnishes an excellent field-mark. The pinkish brown breast and sides are somewhat diagnostic also, though this color is not usually seen to good advantage in the field. The call-note is said to be "a sort of *whew, whew, whew.*" Baldpates are, as a rule, shallow-water feeders.



Baldpate, Male

The European Widgeon (*Mareca penelope*) should be looked for in Pennsylvania. The male has a buffy crown. The under wing-coverts of the female are barred, whereas in the female Baldpate the greater under wing-coverts are white.

GREEN-WINGED TEAL

Nettion carolinense (Gmelin)

OTHER NAME.—Mud Teal.

DESCRIPTION.—Small for a Duck, being about half as large as a domestic Duck. *Male*: Head, with flowing crest, chestnut, an area around and back of eye to nape glossy green, bordered below with a thin whitish line; chin black; upperparts gray, finely barred with black; speculum green, bordered with black and buffy; middle under tail-coverts black, lateral ones creamy; breast and sides pinkish brown, finely barred with black, a white bar on side of breast; belly white or buffy, spotted, sometimes irregularly, with blackish. *Female*: Top of head blackish, feathers edged with rufous; sides of head and neck white, heavily streaked with black; upperparts blackish, all feathers margined with buffy; green speculum on wing, as in male; underparts considerably mottled—not barred as in male. Length: 14½ inches.

RANGE IN PENNSYLVANIA.—A migrant from March 20 to April 20 and from September 25 to November 10, often found along smaller streams. Locally, as at Conneaut Lake and at Erie, it is common during the height of migration.

The Teals are our smallest ducks. Their size and remarkably swift flight make them comparatively easy to identify, save in foggy weather when the apparent size of birds in the field is apt to be misleading. The Green-wing feeds like the Mallard and Black Duck, by “tipping” in shallow water and plucking food from the bottom.

BLUE-WINGED TEAL

Querquedula discors (Linnæus)

DESCRIPTION.—Size small, as in Green-wing. *Male*: Head dark blue-gray with violet reflections; crown dark brown; chin and sides of base of bill blackish; a crescent-shaped patch of white in front of eye; back brown, barred and mottled with black; breast white, buffy, or rusty, heavily spotted with black; lesser and middle wing-coverts gray-blue, forming a conspicuous color-area, particularly in flight; speculum glossy green. *Female and immature*: Crown dark brown, irregularly streaked with grayish; sides of head and neck grayish, streaked with black; throat whitish; breast and belly usually whitish spotted and margined with blackish; speculum glossy green. Length: 16 inches.



Green-winged Teal, Male



Blue-winged Teal, Male

RANGE IN PENNSYLVANIA.—A migrant from April 15 to May 15 and from September 1 to October 15, sometimes quite common. It may nest occasionally in marshy situations.

The blue lesser wing-coverts of this species are fairly easy to recognize, even at a considerable distance. It is relatively silent while it is passing through Pennsylvania; the Green-wing is more voluble. At Wildwood Lake, near Harrisburg, Blue-winged Teals occur with some regularity along a marshy neck of land which protrudes into the lake at the mouth of an inflowing stream. Here the birds rest quietly, feeding in early morning and toward evening, and flying about only when they are disturbed. They are usually mated by the time they reach this latitude in the spring.

SHOVELER

Spatula clypeata (Linnæus)

OTHER NAME.—Spoonbill Duck.

DESCRIPTION.—Comparatively small, but larger than the Teals. Bill very large and broad, noticeably so even at considerable distance in the field. *Male*: Head and neck rich black, glossed with green and violet; line down back of neck and back dark brown; belly and sides rich chestnut; lesser wing-coverts gray-blue, as in the Blue-winged Teal, the greater coverts brownish, tipped with white; speculum green; upper and under tail-coverts black; eyes yellow; feet pink. *Female*: Head and neck streaked with black and buffy bars; throat buffy; underparts buffy, feathers margined and



Shoveler, Male

spotted with dark brown and buffy; feet orange-pink, paler than in male; eyes brown; bill greenish yellow, blotched with brownish. *Immature birds* are intermediate in appearance between the adult male and adult female. The immature female's speculum is noticeably grayish, with little green. Length: 20 inches.

RANGE IN PENNSYLVANIA.—Rather rare migrant from March 1 to April 15 and from September 15 to November 1. Not usually seen in large flocks.

The huge bill of this species will distinguish it in any plumage. Its blue wing-coverts have much the appearance of those of the Blue-winged Teal.

PINTAIL

Dafila acuta tzitzioa (Vieillot)

OTHER NAMES.—Sprig; Sprig-tail; Spike-tail.

DESCRIPTION.—Neck long and slender in both sexes. *Male in mating plumage, which is characteristic of the winter months*: Head warm brown, glossed faintly on cheeks with violet; back of neck blackish, bordered by

white stripes which run down sides of neck to breast; back brownish gray; shoulders black, margined with white or buffy; wing brownish gray, the greater coverts tipped with cinnamon; speculum green, bordered narrowly with white; central tail-feathers very long and narrow, black; underparts white; sides heavily marked with fine lines of black. *Female:* Crown blackish, irregularly marked with rich brown; throat white; sides of head and neck considerably streaked; breast buffy, spotted with blackish; feathers of sides margined and barred with dark brown and white; under wing-coverts dark brown, bordered with whitish.

The male in summer breeding dress resembles the female. *Length:* Male, 28 inches, in full, long-tailed plumage; female, 22 inches.

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant from March 1 to April 15 and from September 20 to December 15. It has even been known to winter in the northern part of the Commonwealth.

The female, while not strikingly marked, may be recognized by the long neck, the sharply pointed middle tail-feathers, and by the dark under wing-coverts. Pintails are swift fliers, and have the ability of rising straight into the air from a pond or from the ground.

WOOD DUCK

Aix sponsa (Linnæus)

DESCRIPTION.—Smaller than Mallard; both sexes with crest, smaller in female than in male. *Male:* Head and crest rich glossy green, with violet and blue reflections; a line from bill over eye, a line along side of crest, and other lines in flowing feathers of crest, white; throat, a band from it up cheeks, and a wide band at nape, white; breast and an area at either side of base of tail, chestnut, the breast spotted with white; band on breast in front of wing, white; sides buffy, finely barred with black, the long flank-feathers tipped with striking bands of black and white; back greenish brown; scapulars blackish, glossed with steel-blue and greenish; speculum steel-blue tipped with white; primaries tipped with greenish blue; tail blue-black; eyes red; bill dusky, white, and red; feet yellowish.



Wood Duck Male
Female

Female: Area below and back of eye, and throat, white; crown brown, glossed with purplish; sides of head ashy brown; breast and sides grayish, streaked and mottled with brownish; belly white; back olive-brown, glossed with greenish; the inner primaries tipped with greenish blue. The immature



Pintail
Male Female

resembles the adult female. The male in eclipse plumage, which he assumes during late summer, is similar to the female. *Length:* 18½ inches.

RANGE IN PENNSYLVANIA.—Fairly common as a migrant and summer resident throughout, arriving in early April and remaining until November 1. Commoner than most species of this family along the smaller streams.

NEST.—In a cavity in a tree. *Eggs:* 7 to 15, buffy white.

The male Wood Duck, thought by many to be the most beautiful American bird, is a gorgeous creature. It is little wonder that an Indian legend tells us that a little gray duck, while on a search for happiness, swam into the end of the rainbow and came forth the brilliant creature we now call the Wood Duck.

Agile almost as a perching bird, these ducks run about on the ground, snapping up insects, or swim buoyantly in quiet pools near the woodland they have selected as their summer home. In a cavity in a tree, sometimes at considerable distance from the water and at quite a height from the ground, the down-lined nest is built.

The young birds, it is said, clamber out of the nest and fall to the ground as best they can, without being helped by either parent. Surely, young birds which survive such an ordeal are prepared for the later battles of life!

Wood Ducks are fond of acorns and of the seeds of many aquatic plants. The young birds, like the adults, are amazingly agile and run about like young chickens, bright-eyed, attractive, and so small as to be fairly ludicrous as they race into the water for a swim!

REDHEAD

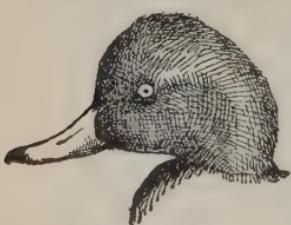
Nyroca americana (Eyton)

DESCRIPTION.—Head high, rising abruptly from bill; both sexes with tendency toward fluffy, round crest. *Male:* Entire head bright rufous, glossed with purplish; lower neck, all around, breast, and upper back, blackish; rest of back and scapulars finely barred with wavy black and white lines

of equal width; wing-coverts brownish gray; wings gray, without a noticeable speculum; upper and under tail-coverts black; belly white, lower belly more or less barred like back; sides barred as in back; eyes yellow; bill blue-gray. *Female:* Upperparts dark grayish brown, darker on wings, all feathers more or less margined with buffy or ashy; neck buffy, somewhat mottled; breast and sides gray-brown, washed or margined with buffy; belly and under tail-coverts somewhat suffused with buffy; eyes brown; bill blackish, with blue-gray band at end. *Length:* 19 inches.

RANGE IN PENNSYLVANIA.—Fairly common as a migrant, noticeably along the larger waterways, from March 1 to April 25 and from October 10 to November 15. Sometimes occurs in great flocks.

The high head and yellow eyes distinguish the male Redhead from the male Canvasback, which is otherwise similar in appearance.

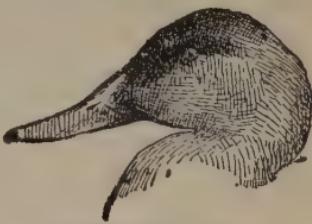


Redhead, Male

CANVASBACK

Aristonetta valisineria (Wilson)

DESCRIPTION.—Bill long and gradually sloping up to the head which is long and low, different markedly in this respect from that of the Redhead. *Male:* Head and neck rufous; chin and crown blackish; lower neck, breast, and upper back, black; back and wing-coverts barred with black and white, the white lines so much wider as to appear, even at some distance, whiter than in the Redhead; belly white, sides finely barred; upper and under tail-coverts and tail, black; eyes reddish brown; bill blackish. *Female:* Head, neck, breast, and upper back, light rufous; throat pale, the frontparts of head somewhat brighter; back, grayish brown, feathers washed with wavy white lines which the female Redhead does not have; belly white; sides grayish brown, sometimes marked like back. *Length:* 21 inches. The female is a little smaller than the male.



Canvasback, Male

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant, principally along the larger waterways, usually from March 10 to April 20 and from October 1 to December 15, sometimes abundant; irregular in winter.

The white back of the male Canvasback is noticeable at a distance. The female, which is rather similar to the female Redhead, may always be recognized by the long, rather thin bill and low head.

SCAUP

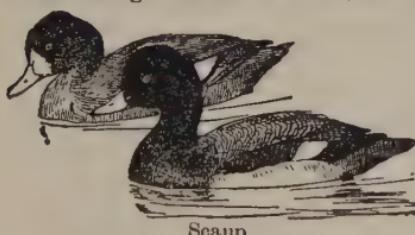
Fulix marila nearctica (Stejneger)

OTHER NAMES.—Blue-bill; Black-head; Raft Duck; Greater Scaup; American Scaup.

DESCRIPTION.—*Adult male:* Head, neck, breast, and upper back, black, head with greenish reflections; back and scapulars barred with black and white; speculum white; upper and under tail-coverts black; belly white, lower belly and sides finely barred with black; bill blue-gray; eyes yellow. *Female:* Area about base of bill white; head, neck, upper back, and breast, dark brown, margined with buffy on breast; rest of upperparts somewhat lighter brown; sides brown, marked with wavy white lines; belly and speculum white. *Length:* 18½ inches.

RANGE IN PENNSYLVANIA.—Fairly common as a migrant from March 10 to April 25 and from October 1 to December 10. The Scaups are among the species of this family most commonly recorded at reservoirs and along large waterways.

The two Scaups are not easy to distinguish in the field, and certain identification depends upon the males, for the females are very much alike. The male Scaup's head shows greenish reflections; the Lesser Scaup's head is glossed with purplish.



LESSER SCAUP

Fulix affinis (Eyton)

OTHER NAMES.—Blue-bill; Black-head; Raft Duck.

DESCRIPTION.—Decidedly similar, in both sexes, to the preceding species, but smaller, and the male's head with purplish, rather than greenish reflections. The barring of the sides of the Lesser Scaup is stronger than in the Scaup. The females of the two species are practically indistinguishable in the field. *Length:* 16½ inches.

RANGE IN PENNSYLVANIA.—Commoner throughout than the preceding species, although some of our field records may be open to question in view of the similarity of the two. The white speculum, dark head, and blue-gray bill are good field characters to remember.

RINGED-NECKED DUCK

Perissonetta collaris (Donovan)

OTHER NAMES.—Blue-bill; Black-head; Raft Duck.

DESCRIPTION.—Both sexes similar to the Scaup and Lesser Scaup in general appearance, differing in the following respects: in the male Ring-neck the chin is white; the head, which has a somewhat higher crest than in either Scaup, is richly glossed with purplish blue; there is a rich brown collar about the neck (not easily noted in the field); the back is blackish, and the speculum is gray, not white; the female Ring-neck may be distinguished from the female Scaups by the gray speculum; the head and neck of the female Ring-neck often has a mottled or spotted appearance. In both sexes the blackish bill, which is crossed near the tip with a whitish band, is an excellent field-mark. If the sun is bright, this band may give the impression that the bird is holding some small shining object in its bill. *Length:* 16½ inches.

RANGE IN PENNSYLVANIA.—While our records tend to indicate that this species is less common than the Scaup or Lesser Scaup, it is probably fairly regular and common as a migrant, occurring at about the same time as the Lesser Scaup.

GOLDENEYE

Glaucionetta clangula americana (Bonaparte)

OTHER NAMES.—Cuphead; Whistler.

DESCRIPTION.—Both sexes with short, stubby bills and high heads. *Male:* Head black, glossed with green; a white spot below and in front of eye; neck, exposed part of wing-coverts, speculum and part of scapulars, and underparts, white; rest of plumage black; eyes yellow. *Female:* Head brown, neck paler; breast, back, and sides gray; speculum and underparts white; eyes yellow. *Length:* 20 inches.



Goldeneye, Male

Goldeneyes will sometimes be seen resting on a floating piece of ice. The musical, whistling sound of their beating wings has been responsible for their common name, "Whistler."

RANGE IN PENNSYLVANIA.—A migrant which sometimes occurs in winter when there is open water, but is not often common. It is to be found from March 1 to April 15 and from October 10 to November 30.

The large head and ludicrously short bill are fairly good field-marks for this species, even at a considerable distance. The strongly contrasting black and white plumage of the male is not easily to be confused with that of any other species.

The Barrow's Goldeneye (*Glaucionetta islandica*) is much rarer in Pennsylvania than the Goldeneye. The male has a purplish head and a somewhat crescent-shaped patch in front of and below the eye. His scapulars are marked with white areas along the shafts. Records of this species are very desirable.

BUFFLEHEAD

Charitonetta albeola (Linnæus)

OTHER NAMES.—Butterball; Dipper Duck.

DESCRIPTION.—About half as large as a Mallard; both sexes with short bills and high, rounded crests, more or less as in the Goldeneye. *Male*: Head black, glossed handsomely with greenish, purplish, bluish, and fiery orange; a large white band across back of head from eye to eye; lower neck, wing-coverts, speculum, outer scapulars, and underparts, white; back and wings black; lower back and tail grayish; eyes dark brown. *Female*: Head and upper breast dull brown, patch on either side of head, speculum, and breast and belly, white. Length: 15 inches.

RANGE IN PENNSYLVANIA.—Common, sometimes abundant, as a migrant, from March 15 to April 15 and from October 1 to November 10. It is often seen along the smaller, swifter streams and at small lakes. Mated pairs are usually noted in spring.

The male, like the Wood Duck, is a creature of great beauty. The Bufflehead is a good diver, and can disappear at the wink of an eye with the agility of a grebe. It eats much animal matter, including small fish which it captures while diving. These ducks are often exceedingly fat, and this tendency, as well as the plump roundness of their body, has given them the common name, "Butterball."



Bufflehead, Male

OLD SQUAW

Clangula hiemalis (Linnæus)

OTHER NAMES.—Old Wife; Sou' Southerly; Long-tailed Duck.

DESCRIPTION.—Male with very long, narrow, middle tail-feathers, longer than in the Pintail; female without long tail-feathers. *Male in winter*: Sides of head washed with grayish brown; sides of back of head and upper neck black, more or less margined with buffy; rest of head, neck, upper back, scapulars, and lower belly, white; back and wings, breast, and upper belly, black; bill black with yellowish orange band across end; eyes pale brown. *Female*: Upper parts dark brown; scapulars and back more or less margined with grayish; sides of head and neck white or whitish; breast gray; belly white. The male in summer has the sides and front of head white; the rest

of the plumage is chiefly black, save the belly, which is white. *Length:* male, 21 inches; female, 16 inches.

RANGE IN PENNSYLVANIA.—A migrant from February 20 to April 10 and from November 1 to December 20, sometimes occurring in winter, and irregularly very abundant. Tremendous flocks have been noted at Conneaut Lake and at Lake Erie.



Old Squaw, Winter Plumage

The Old Squaw is a handsome and noisy species and demands attention wherever it is found. It usually feeds in deep water, and therefore is found but rarely in smaller ponds or along streams. The under wing-coverts are dark, and there is no speculum in the wing. Its rapid flight carries it along, a few feet

above the water, at from 35 to 60 miles an hour, perhaps faster, and it alights with a swish. It is an expert diver.

THE SCOTERS

Three species of scoter occur in Pennsylvania. They are diving ducks and are usually to be found only on the larger bodies of water. As a rule, they are not common; they are fond of salt water, and are commonly found in the bays along the Atlantic coast. The adult males all have grotesque and highly colored bills. All scoters are commonly called "Black Ducks" in the interior; along the coast they are called also "Sea Coots." Scoters will, as a rule, be found in large, raft-like flocks.

AMERICAN SCOTER

Oidemia americana Swainson

DESCRIPTION.—*Male:* Black, with rich purplish reflections; ridges among feathers of neck; bill black, with knob at base of upper mandible peach-yellow; feet brownish red; eyes dark brown.
Female and young: Gray-brown in general appearance, with cheek region whitish, sharply defined from crown; underparts whitish, irregularly barred and mottled with dusky.
Length: 19 inches.

RANGE IN PENNSYLVANIA.—Rare migrant and winter visitant from November until early April, commonest, perhaps, at Lake Erie and Conneaut Lake.



American Scoter, Male

This is probably the rarest of the scoters in Pennsylvania; further data are desirable.

WHITE-WINGED SCOTER

Oidemia deglandi Bonaparte

DESCRIPTION.—Size large, noticeably larger than a Mallard. *Male*: Black, with white spot below and at rear of eye, and white speculum; belly and sides rich deep brown; bill orange, with long knob, black at base, feathers reaching forward on it far beyond corners of mouth; feet red; eyes white. *Female and immature*: Deep brown, lighter below; speculum white; spot at base of bill and ear-coverts whitish, not always clearly defined. *Length*: 22 inches.

RANGE IN PENNSYLVANIA.—As a rule, rare, save at Lake Erie and Conneaut Lake where it is sometimes fairly common during late fall; it is rarer in spring than in fall.

The white speculum of this large, heavy species will serve to identify it at some distance.



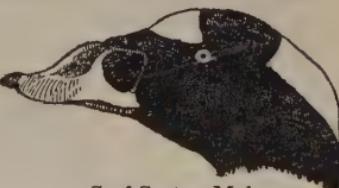
White-winged Scoter, Male

SURF SCOTER

Melanitta perspicillata (Linnæus)

DESCRIPTION.—Larger than Mallard. *Male*: Black, with square crown-patch and triangular nape-patch of white; feet red; bill marked with red, white, and yellow, a black spot near base; eyes white. *Female and immature*: A whitish spot at base of bill and on ear-coverts, much as in the White-winged Scoter; upperparts dark brown; throat, breast, and sides grayer; belly white. *Length*: 20 inches.

RANGE IN PENNSYLVANIA.—Like the White-winged Scoter, rare, save at Conneaut Lake and Lake Erie where it is a fairly common fall and rare spring migrant, which sometimes occurs during the winter. Scoters are occasionally seen along the Susquehanna and the Delaware rivers, but they are not, as a rule, either common or regular.



Surf Scoter, Male

The strange shape and color-pattern of the bills of male scoters will distinguish them at once in hand. They are given to flocking and, as they feed, most of the flock may disappear for seconds at a time, to bob up buoyantly as others of the flock slip under.

RUDDY DUCK

Erismatura jamaicensis (Gmelin)

OTHER NAMES.—Butterball; Bullhead; Bullneck; Dipper Duck.

DESCRIPTION.—Both sexes with thick necks, short upper tail-coverts, and stiff tails; about half as large as a Mallard. *Male*: Crown black; cheeks and chin white; throat, neck, and back rich rufous; lower back and tail blackish; breast and belly silvery white, somewhat mottled along sides; bill pale gray-blue; eyes black. *Female and immature*: Upperparts dark grayish brown, feathers marked with narrow, wavy, buffy bars; sides of head

and upper throat whitish; lower throat and neck grayish; underparts silvery white. *Length:* 15 inches.

RANGE IN PENNSYLVANIA.—Fairly common and regular as a migrant, sometimes abundant, from April 1 to May 15 and from October 1 to November 15. It is seen along smaller as well as larger waterways where it may dive readily upon being approached.



Ruddy Duck
Male Female

have difficulty in rising from the water, for their wings are comparatively small. As they get under way they patter with their great feet while their wings beat the water noisily. The neck of the Ruddy Duck is unusually large for a duck. The head may even be pushed back into the skin of the neck; in most ducks the circumference of the neck is noticeably less than that of the head at its greatest diameter.

CANADA GOOSE

Branta canadensis canadensis (Linnæus)

OTHER NAMES.—Wild Goose; Honker.

DESCRIPTION.—Size large, about that of a domestic Goose, with about the same proportions; sexes similar. Head and neck black, a broad band under eye, and across throat, white; upperparts brownish gray, the feathers margined with a lighter shade, giving a somewhat scaled appearance; breast and sides gray-brown, more or less as in back; belly white; rump and tail black; upper tail-coverts white. Feet and bill black; eyes dark brown.

Length: About 3 feet.



Canada Goose

RANGE IN PENNSYLVANIA.—A regular and sometimes common migrant from mid-February to early April and from October 15 to November 30, sometimes occurring in winter, even when ice covers the lakes, at which times the great birds stand about on the frozen surface. As a rule, Canada Geese do not stop long in Pennsylvania; most flocks do not linger here at all, merely passing over.

For us, since the days of our forefathers, and for the Red Man who originally inhabited

Penn's Woods, the V-shaped spring flocks of Canada Geese have heralded the breaking up of the winter, and, in the fall, the coming of the cold season. Canada Geese migrate both by day and night, but they are noticed at night more often than by day because in the comparative stillness of the dark hours their loud, musical bugling drifts down to us as we lie awake, thrilled at the sound. Could we see the great birds, could we know the distant clime toward which they are heading, some of the mystery might be dispelled; but their long journey, their great bodies speeding along at 60 miles an hour or more, and their wide, swishing wings are only suggested by the clamor and challenge that comes to us, holds us spellbound, then gradually dies away as the flock passes on.

Canada Geese are not so aquatic in habit as are ducks. Large flocks often descend to the fields where they feed upon grass or sprouting grain and where they walk about in a dignified fashion.

It is supposed that an old gander always leads the migration flocks. While this may not be the case, it is reasonable to assume that adult birds, with their experience and intelligence, should determine the movements of the flock. Canada Geese sometimes fly in a line, sometimes abreast, but the V-formation is characteristic.

The Greater Snow Goose (*Chen hyperboreus nivalis*), a white bird with black wing-tips, sometimes flies across Pennsylvania. It has been recorded once or twice in huge flocks. The White-fronted Goose (*Anser albifrons gambelli*), a gray goose with a white area at the base of the bill, black spots on the belly, and yellow feet, occurs rarely. The Brant (*Branta bernicla glaucogastra*), smallest of our geese and similar to the Canada Goose but with only a suggestion of a white band on the neck, occurs rarely. It is a maritime species, not often noted inland.

WHISTLING SWAN

Cygnus columbianus (Ord)

DESCRIPTION.—Size very large; neck extremely long, and wing-spread sometimes as much as 6 to 7 feet; sexes similar. **Adults:** Pure white; bill and feet black, a small yellow spot at base of upper mandible just in front of eye; eyes brown. Young birds are pale brownish gray in color, usually darkest on the head and neck. As the immature plumage is replaced by the adult plumage, a vague mottling appears. **Length:** About 4½ feet.

RANGE IN PENNSYLVANIA.—A fairly regular migrant along the larger waterways; rare and irregular elsewhere; occasional in winter. It is usually seen in early spring from March 20 to April 15 and from October 15 to December 1.

A flock of swans flying in the sunlight is an inspiring spectacle. The birds are so large and their plumage so immaculate that they attract attention everywhere.

They sometimes migrate in immense flocks. In storms or on foggy nights they may become bewildered and descend to smaller streams, but, as a rule, they are found only along large open stretches of water.

At Harrisburg, swans sometimes spend the winter along the Susquehanna when the water is open.

The Trumpeter Swan (*Olor buccinator*), always a very rare bird in the eastern United States, and of late thought to be on the verge of extermination, is even larger than the Whistling Swan. The bill of this species is entirely black, lacking the yellow spot which is characteristic of the adult Whistling Swan and being of a different shape.

AMERICAN BITTERN

Botaurus lentiginosus (Montagu)

OTHER NAMES.—Thunder-pump; Bum Cluck; Stake-Driver; Plum Pudd'n.

DESCRIPTION.—Sexes similar; larger than Crow. Upperparts brown, considerably mottled, streaked, and barred with black; a glossy black streak from corners of mouth down sides of neck; throat white; neck and breast marked with broad buffy brown streaks, which are mottled with brownish gray, in imitation of dead cat-tail leaves; belly buffy; feet greenish; bill greenish yellow at base, blackish at tip; eyes bright yellow. Length: 28 inches, with neck stretched out.

RANGE IN PENNSYLVANIA.—Fairly common migrant and summer resident, nesting only in marshy situations. It arrives in early April and leaves in late September or early October.

NEST.—A platform of cat-tail leaves and stalks, or other dead vegetation, usually placed in a remote section of some marsh, among rather high weeds. Eggs: 3 to 5, pale buffy brown.

The Bittern is a terrestrial heron and rarely alights in trees. It may be confused with the immature Black-crowned Night Heron, which, unlike the Bittern, often perches on a prominent branch or on a tree top.

To know the Bittern one must penetrate the swamp. From the cat-tails, a great brown bird arises, green feet awkwardly dangling. Rapidly the creature makes away, once it has started; perhaps it utters a startled squawk as it jumps from the grass.

In the spring, male Bitterns have a remarkable courtship ceremony which is accompanied by the queer sounds which have given the bird most of its common names. These names, most of which are very good renditions of the queer sounds the birds give, are: "Bum Cluck" or "Plum Pudd'n." The familiar nicknames, "Stake-Driver"



American Bittern

and "Thunder-Pump" also suggest the sounds. While they give these sounds, the male birds inflate their necks and fluff out their feathers, as they strut and bow, and snap their bills.

The sitting mother bird depends greatly upon her remarkably protective coloration. Taken unawares, the hunting Bittern will stand erect with bill pointing skyward, realizing that its dull colors, its streaked breast, and its sharp bill all resemble cat-tail leaves. The eyes of a Bittern are so arranged that the bird can point its bill straight up yet at the same time look directly at us as we approach. Its golden-yellow eyes have a serpentine appearance.

Young Bitterns, in their ragged natal down, are odd creatures. They clamber about their crude cradle, soon developing remarkable strength in toes and feet.

The Bittern and young Black-crowned Night Heron are our only large, brown herons; the Bittern has yellow eyes; the young Black-crown has dark brown eyes.

LEAST BITTERN

Ixobrychus exilis (Gmelin)

DESCRIPTION.—Size very small, body hardly as heavy as that of a Robin; proportions those of a heron, however, with long bill and feet and short tail. **Male:** Crown, which has a crest, back, and tail, glossy black; back of neck chestnut; lesser wing-coverts buffy; greater wing-coverts and secondaries chestnut, darker than neck; underparts buffy, somewhat streaked on neck with white and fine lines of brownish; a black patch at each side of breast; throat, line along sides of back and of breast, and under tail-coverts, whitish; feet yellowish green; bill yellowish, tipped with dusky; eyes yellow. **Female and immature:** Similar, but black of crown and back less glossy, coloration throughout less striking. **Length:** 13 inches.

RANGE IN PENNSYLVANIA.—Rather rare migrant and summer resident, save locally, when it nests in cat-tail swamps and similar situations. Its date of arrival is open to question since the birds are so silent and retiring as to pass for the most part unobserved. They probably come in mid-April and leave in late September.

NEST.—A platform of cat-tail stalks and similar materials built on the ground, or a few inches above the ground, or in weeds above the water, and surrounded by high weeds and grasses. **Eggs:** 3 to 6, pale blue.

The Least Bittern is one of our quietest, most retiring birds, and is therefore but little known. It may occur regularly in cat-tail swamps where it has never been seen, simply because no one ventures into its damp, shadowy home among the high, green blades.

It moves slowly, as a rule, and with marvelous control. As it



Least Bittern

has very strong feet, it can climb up the cat-tail leaves where it sometimes perches so as to survey its surroundings the better.

If startled, it flies up rapidly; but, like a Rail, it does not like to fly far because its long, rather awkward wings appear to tire quickly, and it drops back into its retreat, where it is usually difficult to find it again.

The parent bird has the strange habit of destroying, and perhaps eating, her eggs if they are disturbed. We found a nest containing two fresh eggs at Sandy Lake, Mercer County. Upon returning, a few hours later, I found but a few shells in the nest. I feel certain the parent bird, either the male or female, had destroyed the eggs.

GREAT BLUE HERON

Ardea herodias herodias Linnæus

OTHER NAMES.—Crane; Fish Crane; Sandhill Crane (all erroneous).

DESCRIPTION.—Size very large, the largest of our herons; sexes similar. *Adults in breeding plumage:* Blue-gray, generally speaking; center of crown and throat white; sides of crown and nape black, where long, black feathers form a considerable crest; neck grayish brown, tinged with pinkish; a narrow black, white, and buffy line down middle of fore-neck; feathers of lower neck much lengthened and narrowed, with whitish and blackish streaks; bend of wing chestnut-brown; a ruff of black on shoulders; breast and belly streaked with black and white; feathers on legs reddish brown; legs and feet black; lower mandible yellow; eyes bright yellow. *Immature:* Similar but entire crown black and plumage considerably marked, margined, and washed with rusty. Adults have plume-like feathers on the lower back which the immature birds lack. *Length:* About 4 feet.



Great Blue Heron

RANGE IN PENNSYLVANIA.—A common summer resident along all water-ways; irregular and local as a nesting species, however; usually found in colonies. The birds arrive in mid-March and remain until late October. They have been noted irregularly during winter.

NEST.—In Pennsylvania, the Great Blue Heron usually, if not always, nests in trees; in some sections of the United States it nests on the ground. The nest is a huge, sprawling affair, made of long sticks, and placed high in a tree, which, if alive, becomes dead as a result of the droppings from the birds. *Eggs:* 3 to 6, pale blue.

Reports concerning Sandhill Cranes in Pennsylvania usually refer to this species, as cranes do not occur here. Cranes have an elevated, short hind toe; the hind toe of a heron is on the same level

as the other toes, and therefore shows in the track. Herons fly with their necks doubled back, except when they are springing into the air or alighting; cranes always hold their necks straight out.

The Great Blue Heron is an expert fisherman. Statuesque, he stands in the water, intently watching for fish, which he captures with his great, powerful bill, and he can swallow a 14-inch fish without great difficulty. He has favorite fishing-points, and here, in the mud along the bank, his great tracks may be seen. If the bird student wishes to see one of these herons he usually has but to wait at such a point for the evening hour of fishing, and the wide-winged bird, with neck drawn back into the body, and feet sticking straight out behind, will fly deliberately down to the angling-grounds, and there promptly devote himself to capturing a meal.

AMERICAN EGRET

Casmerodus albus egretta (Gmelin)

OTHER NAMES.—Egret; White Crane (erroneous).

DESCRIPTION.—Size large, standing about 3 feet high. Pure white, with *black-tipped yellow bill*, yellow eyes, and *black feet*. In its breeding plumage it has exquisite plumes on the back. Birds seen in Pennsylvania usually have no trace of these plumes. Length: About 3 feet, with neck fully stretched.

RANGE IN PENNSYLVANIA.—A midsummer wanderer, found chiefly in the southeastern counties where it may occur in some numbers during July and August.

The Egret, as it stands along a verdant bank, is a creature of great beauty. Its white plumage makes it conspicuous in any setting. It is larger than the Little Blue Heron which, in its white phase of plumage, also occurs in Pennsylvania during midsummer. The delicate nuptial plumes, stripped from the backs of nesting birds, were once very popular as decorations for women's hats.

LITTLE BLUE HERON

Florida cærulea cærulea (Linnæus)

OTHER NAMES.—White Heron; White Crane (erroneous).

DESCRIPTION.—Smaller than Egret. White, with *dusky wing-tips*; bill dark, dull gray-green; feet greenish. In its breeding-range some birds are dark blue, others white. It is supposed that there are two phases of plumage. In Pennsylvania the white phase is customarily seen. Length: 22 inches.

RANGE IN PENNSYLVANIA.—A midsummer wanderer, usually seen in the southeastern counties during July and August.

This bird should not be confused with the Snowy Heron, a southern species which does not wander much during summer, and which *never has dusky spots* on the wing-tips. The smaller Green Heron has a somewhat bluish back, but must not be confused with this species.

GREEN HERON

Butorides virescens virescens (Linnæus)

OTHER NAMES.—Fly-up-the-Creek; Shite-poke; Green Bittern.

DESCRIPTION.—Size small; sexes similar. Crown, crest, and line below the eye black, glossed with green; throat whitish, extending down neck as a frontal line which widens at breast; neck reddish brown, glossed with purplish; back with plume-like feathers, blue-green, appearing blue in most lights; wing-coverts glossy green, margined with buffy; tail green; belly gray, some feathers edged with buffy; bill yellowish with dusky tip; feet and eyes bright yellow. *Immature:* Mottled in appearance, considerably streaked with black on neck and under parts; crest small; no plume-like feathers or blue-gray color on the back. Nestlings are covered with long, irregular down. *Length:* 17 inches.

RANGE IN PENNSYLVANIA.—A common summer resident from April 10 to September 30. It is to be found along all small streams and ponds.

NEST.—Of sticks, placed together as a shallow platform, from 6 to 30 feet from the ground in a bush or tree. *Eggs:* 3 to 6, pale blue. Green Herons sometimes nest in small colonies, but in Pennsylvania are more frequently found in solitary pairs.

The Green Heron has the interesting habit of twitching its tail nervously when it is excited. These small but adept fishermen are usually frightened from some favorite haunt along a stream. They fly up rapidly, uttering loud, harsh squawks which may be written *keeow*, or *skeeowp*. Their yellow feet and blue backs show plainly as the birds fly away. The fact that the Green Heron's back is so noticeably blue should not lead the bird-student to think he is seeing the Little Blue Heron, a species which is rare in Pennsylvania and which, when it does occur, is usually found in its white plumage.

BLACK-CROWNED NIGHT HERON

Nycticorax nycticorax nævius (Boddært)

OTHER NAMES.—Quawk; Bull Bittern.

DESCRIPTION.—Larger than Crow; bill heavy and blunt for a heron; neck usually drawn in, though it is of considerable length, as in other members of the family; sexes similar. *Adults:* Forehead, lores, neck, and underparts white, somewhat grayish on neck; crown, upper back, and scapulars black, glossed with green; two or three long white plumes on back of crest; wings, tail, and lower back clear gray; legs and feet yellow; bill dusky with yellowish green base and bare area in front of eyes; eyes red. *Immature:* Grayish brown above, the feathers streaked or tipped with buffy or whitish; outer webs of primaries rusty; underparts whitish, streaked with dark gray-brown; feet and legs yellow; bill dusky; eyes dark red-brown or red. *Length:* 2 feet.



Green Heron

RANGE IN PENNSYLVANIA.—A summer resident, locally abundant in eastern and southeastern Pennsylvania, where colonies occur along the Susquehanna and Delaware rivers; in western Pennsylvania the species is rare and irregular; at Erie it has been noted a few times. It arrives at its nesting-grounds in late March or early April and remains until October.

NEST.—A platform of sticks, usually placed high in a tree. Many nests, sometimes hundreds of them, are placed together in a favorite grove which is usually near a lake or on an island in a river. At Harrisburg the Night Herons nest on McCormick's Island. *Eggs:* 3 to 6, pale blue.

The loud, barking *qua* of the Night Heron as it rises from its fishing-ground and flies over after nightfall is a startling sound. The species may be identified easily from this sound alone.

Immature birds look somewhat like a Bittern, but the Bittern is a bird of the ground, rarely alighting in trees, whereas the Night Heron, after being frightened from a retreat along the shore, usually alights on a high branch.

Night Herons sometimes circle over the water, snatching their food from the surface, like gulls. As a rule, such activities are noted only during the nesting season, however, when the young have to be fed. When there are no family duties, they prefer to hunt at night.

The heavy bill and habit of perching with neck drawn in gives the bird a characteristic appearance at a distance.

The nesting colony, while interesting to the bird-student, is offensively filthy and has a disagreeable odor. The young, when newly hatched, give forth a peculiar, chuckling *peep* which has a somewhat ventriloquistic quality. As they develop they clamber about the branches, using their necks, wings, and bills in crawling from perch to perch.

KING RAIL

Rallus elegans elegans Audubon

DESCRIPTION.—The largest of our rails, about the size of a crow, but with slenderer body; sexes similar. Upperparts dark brown, feathers of the back and scapulars widely margined with olive-gray; wings and tail olive-brown; throat and areas in front of and above eye, white; neck and breast rich reddish brown, much like the breast of a robin; sides and flanks dark brown, or blackish, sharply and widely barred with white; bill dull reddish yellow, tipped with black; feet dull reddish; eyes bright red. Immature birds are darker and less handsomely marked. *Length:* 15 inches.

RANGE IN PENNSYLVANIA.—A rare, local migrant, probably occasional as a summer resident. It nests only in marshy sections. Nesting records are very desirable. It is to be found from April 15 to mid-September.



Black-crowned Night Heron

The King Rail, though a rather large bird, is so rare and retiring that it is rarely seen, and Pennsylvania records are few. It has been noted chiefly in the less mountainous counties and is apparently commoner in the fall, when the gunners sometimes take the bird. King Rails are weak fliers; sometimes they drop exhausted in the middle of a city and residents are startled at seeing a queer bird on the streets.

VIRGINIA RAIL

Rallus virginianus Linnæus

DESCRIPTION.—Size of robin; sexes similar. Upperparts dark brown or black, the feathers edged with olive-brown or gray; wings and tail dark brown, reddish brown on coverts; forepart of superciliary line and throat, white; cheeks grayish; underparts reddish brown, save on flanks and under tail-coverts which are black or dark gray, sharply barred with white; bill and feet reddish; eyes red. Immature birds are darker throughout and the red-brown of the underparts is replaced by blackish, mixed with white. *Length:* 9½ inches.



Virginia Rail

RANGE IN PENNSYLVANIA.—A fairly regular but local summer resident, sometimes common, from April 15 to September 30. It nests only in marshy situations, where it lives among cat-tails or other aquatic vegetation.

NEST.—Of cat-tail leaves or grasses, made in a cup, placed at the base of water-plants on the ground, or a short

distance above the water, usually well sheltered from above, sometimes by a canopy of cat-tail leaves which has been arranged by the parents. *Eggs:* 6 to 11, buffy white, spotted with dark or reddish brown.

The pig-like grunts and squawks of a pair of Virginia Rails may bewilder the casual wayfarer near a cat-tail marsh. Rails are rarely seen but may appear along one of the open waterways if the observer remains motionless and silent.

SORA RAIL

Porzana carolina (Linnæus)

OTHER NAMES.—Ortolan; Reed Bird; Carolina Rail.

DESCRIPTION.—Smaller than a robin; bill rather short; sexes similar. *Adults:* Center of crown, region at base of bill back to eye, and broad line down chin and throat, black; front of crown, sides of head, and rest of throat and breast, ashy gray, a tiny white spot back of eye; upper-parts olive-brown, the feathers with blackish centers, those of the back and scapulars narrowly but sharply edged with white; wings dark brown, the coverts somewhat lighter; belly and sides of under tail-coverts white; bill yellow; feet green; eyes brown. Immature birds are similar but lack all black on face and throat; the breast and neck are washed with cinnamon-brown, rather than gray, and the upperparts are darker. *Length:* 8 inches.

RANGE IN PENNSYLVANIA.—Fairly common and regular as a migrant; locally abundant from April 25 to May 15 and from August 25 to October 15; occurs as a summer resident wherever marshes furnish it a nesting-site. It is not common as a breeding species.

NEST.—A crude cup made of dead cat-tail leaves or grass, arched over and well concealed by surrounding marsh vegetation. *Eggs:* 8 to 16, buffy, spotted with brown.

The Sora is a weak-winged bird and during migration often flies so low that it strikes itself against wires. These injured birds are often the only individuals of this retiring species which are seen by Pennsylvania bird students, unless the cat-tail marshes, where the birds nest, are visited and penetrated.

In the home of the Sora many strange call-notes are to be heard when the birds are curious or disturbed. Some of these notes are sweet and musical; others are strange and hardly bird-like. One call, which is a series of rapidly descending notes, is characteristic.

The Yellow Rail (*Coturnicops noveboracensis*) is smaller than the Sora and is rich buffy yellow with dark, streaked upperparts. It is exceedingly rare, in fact, virtually unknown, save at Erie and in the marshes about Philadelphia, where it occurs chiefly as a migrant. Additional records are very desirable.

The tiny Black Rail (*Creciscus jamaicensis jamaicensis*) is about as large as an English Sparrow, and is dark brown, sprinkled with white above, with a red-brown mantle from nape down neck, and dark ashy gray below, with barred flanks and red eyes. The Black Rail has been noted but a few times in Pennsylvania. Additional records are very desirable.

FLORIDA GALLINULE

Gallinula chloropus cachinnans Bangs



Florida Gallinule



Sora Rail

OTHER NAME.—Mud Hen.

DESCRIPTION.—Smaller than crow; bill of medium length; general appearance rail-like; sexes similar. *Adults:* Head, neck, upper back and underparts slaty gray, darker on crown and face; a row of white streaks along sides and indistinct bars of white on the belly; lower back and wings olive-brown, richest on scapulars and tail; under tail-coverts white laterally, black in middle; bill, with frontal shield, red, and yellow tip; feet green-

ish yellow, with red area on tibiae just above heel; eyes red-brown. *Immature*: Similar but with underparts whitish, no red on legs, and bill brown, with small frontal shield. *Length*: 13½ inches.

RANGE IN PENNSYLVANIA.—A rather rare migrant during mid-spring and early fall; rare and local as a summer resident.

NEST.—A crude cup of dead cat-tail leaves, placed on the ground or above the water, among water-plants. *Eggs*: 3 to 10, buffy, finely spotted with brown.

The Florida Gallinule, while not often recorded in Pennsylvania, may be commoner than we suppose. Look for it in cat-tail marshes, along channels or little pools of open water. Its call-notes are rather chicken-like.

COOT

Fulica americana Gmelin

OTHER NAME.—Mud Hen.

DESCRIPTION.—Size of a small duck; feet with wide, flat lobes, unique among American birds; sexes similar. *Adults*: Head and neck black, rest of plumage dark slaty gray, somewhat paler below, and sometimes irregularly barred with whitish on breast and belly; edge of wing, tips of secondaries, and lateral undertail coverts, white; bill whitish, with frontal shield and two small spots near tip mahogany-red; legs and feet greenish, somewhat paler on tibiae and on lobes on toes. *Young*: Similar but with a brownish wash on back and lighter below; frontal shield noticeably smaller. *Length*: 15 inches.



Coot

RANGE IN PENNSYLVANIA.—A fairly regular and common migrant, especially on the lakes and larger

waterways, from April 15 to May 15 and from September 15 to November 15; often found in company with ducks. Rare as a summer resident. It should be looked for along the shore of Lake Erie in summer.

NEST.—A crude cup made of cat-tail leaves, sometimes placed in a rather open situation, but arched over with grasses. *Eggs*: 7 to 15, pale buffy white, heavily and evenly sprinkled with small dark brown spots.

The Coot's queer feet are distinctive. As the bird rises from the water, it patters along with these until it has sufficient momentum to rise. Nesting records for the Coot in Pennsylvania are desirable.

WOODCOCK

Rubiculus minor (Gmelin)

OTHER NAMES.—Wall-eyed Snipe; Bog Snipe.

DESCRIPTION.—Appearance snipe-like, with very long bill and large eyes in back of the head, but feet very short, more as in gallinaceous birds; sexes similar, the female larger; three outer primaries narrow and stiff. *Adults*: Back of crown black, crossed with buffy bars; upperparts dark brown and

black, the feathers barred, margined, and speckled with buffy brown and gray; wing coverts buffy brown, barred with darker brown; underparts buffy, tending toward rufous; tips of tail-feathers gray above, silvery white underneath; eyes dark brown; bill and feet pinkish flesh color. Downy young buffy brown considerably marked with blackish. *Length:* 11 inches.

RANGE IN PENNSYLVANIA. — A rather uncommon and somewhat irregular migrant and summer resident, coming sometimes as early as the first week of March and remaining until the middle of October. It is sometimes common during migration, particularly in the fall.

NEST. — A mere depression in the leaves, usually in more or less open woodland, sometimes concealed from above by brush or a bush or tree. *Eggs:* 3 or 4, buffy brown, spotted with darker brown.

In spring the Woodcock must be sought in some bushy swale, along the borders of a marsh, or near a small stream where the low banks are constantly moist and where brush and old logs give this retiring species a retreat. Here the nocturnal birds bore in the mud with their long bills, searching for food which they may grasp with the mobile tips of their mandibles. When disturbed they fly up rapidly, their wings whistling musically as they make off, somewhat erratically, through the undergrowth.

The spring courtship flight of the Woodcock is remarkable. On warm evenings the males *bleat* in their favorite haunts, then, as darkness descends, mount on whistling wings higher and higher, until they are far above the earth. They then hurl themselves back and forth as they start pitching toward the earth, the while producing a twittering sound with their throats as they drop at considerable speed, to alight not far from the point at which they started. Courting Woodcocks will sometimes alight within a few feet of a quiet observer.

Because the incubating bird is quiet and her back so perfectly resembles the leaves and twigs near her, she is very difficult to see. She so implicitly believes that she cannot be seen that she is not often flushed from her nest; sometimes she will permit her back to be stroked or her whole body to be lifted from her eggs.

WILSON'S SNIPE

Capella gallinago delicata (Ord)

OTHER NAMES. — Jack Snipe; English Snipe (erroneous).

DESCRIPTION. — A little heavier than a Robin, but with short tail, very long bill, and moderately long feet; sexes similar. Upperparts black, plumage



Woodcock

edged, barred, and variously marked with white, buffy, and grayish; a light line through middle of crown, another over eye; wings dark brown, outer edge of outer primary and tips of greater coverts, white; tail black, tipped

with orange-buff and white, the outer feathers white, barred with black; throat and belly white; neck and breast buffy, indistinctly barred with dark brown; sides barred with black; under tail-coverts buffy, barred with black; bill greenish dusky; feet dull green; eyes, which are placed rather far back in the head, dark brown. The female is somewhat browner than the male; immature birds are sometimes quite brownish, especially in the region of the head and neck. Length: 11 inches.

RANGE IN PENNSYLVANIA.—As a migrant, rather regular and common, particularly in suitable marshes or along the margins of streams, from March 15 to May 20 and from September 15 to November 10; as a summer resident, local, known to nest at Pymatuning Swamp, Crawford County, and presumably in other northern counties where there are suitable marshes.

NEST.—A shallow cup made of dead stalks of various plants, placed on a small island or a water-soaked log, or in a low, moist, field, among the grass.

Eggs: 4, olive-brown, spotted with rich dark brown, chiefly at the larger end.

The average bird student knows the Snipe as a bird which springs from a marshy spot with startled *scaip, scaip* as it zigzags its way to a safe retreat, or mounts in the air to circle and return. At such a time the reddish brown band at the tip of the tail and the white belly, which flashes as the bird erratically turns, are good field-marks.

On its nesting-grounds the Snipe is a different creature. High overhead, in wide circles, the birds fly, giving forth strange windy hoots which they are said to produce by spreading widely the outermost feathers of the tail. When the performers come to earth they may perch on a wayside post, on a fence, or on a tree—an unheard-of feat for a Snipe at any other season. The male Snipe, and perhaps the female also, performs many queer antics during the nesting season.

The downy young, which leave their nests shortly after hatching, are beautiful creatures—dark brown and black with cream-colored and buffy spots and flecks which are arranged in a pattern which gives them a protective coloration. They are strong-legged creatures and can run rapidly and swim with ease as soon as they leave the nest.

The Dowitcher (*Limnodromus griseus griseus*), a shore-bird which resembles the Wilson's Snipe, is a rare migrant. It is pale rufous,



Wilson's Snipe

speckled with black below, and variously mottled above in summer; in winter it is brownish gray above, white below, with a few dark barrings; in all plumages the rump and upper tail-coverts and tail are noticeably barred with black and white. *Length:* 10½ inches.

The rare Stilt Sandpiper (*Micropalama himantopus*) has long green legs, but otherwise looks rather like a Yellow-legs. In spring it has a red-brown patch on the face and heavily barred underparts; in the fall it is gray above, white below, with a few dusky spots on the breast. The upper tail-coverts in any plumage are white.

The Knot or Robin Snipe (*Calidris canutus rufus*), is a rare migrant also. It is dull rufous below in spring, and the upperparts are streaked and barred with black, white, and rufous. In winter it is gray above, with black and white barring on the upper tail-coverts; below it is white, with faint dark barring. The upperparts in winter have a scaly appearance as the result of light margins of the feathers. *Length:* 10½ inches.

PECTORAL SANDPIPER

Pisobia maculata (Vieillot)

OTHER NAME.—Oxeye.

DESCRIPTION.—Smaller than Robin. *Adults in summer:* Upperparts black, the feathers margined with creamy buff, a distinct superciliary line of buffy white; rump and upper tail-coverts black, narrowly tipped with buffy; middle tail-feathers brownish gray, narrowly margined with white; underparts white, the neck and breast rather heavily but finely streaked with blackish and buffy brown. *Adults in winter and immature:* Similar, but the general appearance much more reddish brown. *Length:* 9 inches.

RANGE IN PENNSYLVANIA.—Recorded chiefly at Erie; a rather rare and irregular migrant in spring from March 20 to May 15; somewhat more common and regular in midsummer and fall, occurring from late July to late October, though it is highly probable that individuals do not remain in one place during this period. As nesting duties in the north are completed, the immature birds and adults in fresh plumage come south in flocks.

The shore-birds are not, as a rule, common in Pennsylvania. There are not many extensive mud-flats where they may feed, and many of the streams have been polluted, destroying the animal food. Erie is such an admirable resting and feeding-ground for such birds that many of them stop there after their flight across Lake Erie, then strike out to the southward, flying over most of Pennsylvania.

The White-rumped Sandpiper (*Pisobia fuscicollis*), which resembles the Pectoral Sandpiper but has a distinctly white rump, is a rare migrant, noted chiefly at Erie and in the Pymatuning Swamp region. The Baird's Sandpiper (*Pisobia bairdi*) is rare, save at Erie, where it is a fairly regular and common fall migrant from late August to the end of September.

LEAST SANDPIPER

Pisobia minutilla (Vieillot)

OTHER NAMES.—Meadow Peep; Oxeye.

DESCRIPTION.—About as large as an English Sparrow. *Adults in spring*: Upperparts black, margined and tipped with buffy and reddish brown; rump and upper tail-coverts black; middle tail-feathers black, outer ones ashy

gray; throat, superciliary, and narrow ring about eye, white; neck and breast buffy, streaked with dark brown; rest of underparts white, the sides with narrow streaks of dusky; bill blackish; feet dull green. *Adults and young in winter*: Upperparts brownish gray; breast pale brownish gray or grayish, indistinctly streaked. Length: 6 inches.

RANGE IN PENNSYLVANIA.—The Least Sandpiper occurs with some regularity both in spring and fall throughout the

Commonwealth. It may be found at almost any wayside puddle or along the margins of streams from early May until about the end of the month and from mid-August to early October, and is particularly common at Erie.

The Least Sandpiper is noticeably smaller than the common Spotted Sandpiper and does not have that species' habit of "tipping up" its tail. It is, however, very similar in general appearance to the Semipalmated Sandpiper, which may occur at the same time, but differs in having *green feet*, and (if the bird be in the hand) in having no *partial webs* between the toes.

RED-BACKED SANDPIPER

Pelidna alpina pacifica Coues

DESCRIPTION.—About the size of a Spotted Sandpiper; bill slightly curved at tip. *Adults in spring*: Back and scapulars bright reddish brown, the feathers with dark centers; breast white, finely streaked with dark brown;

large black patch on middle of belly; lower belly white. Adults and young in winter: Upperparts gray, wing-coverts gray, edged with buffy; underparts white, the breast grayish, the sides sometimes somewhat streaked. Length: 8 inches.

RANGE IN PENNSYLVANIA.—A migrant, rare in spring, fairly common in fall, especially at Erie, where it has been noted from mid-August to late October.

The gay spring plumage of this species is easily remembered. In

the gray winter plumage it is not so easy to recognize, but its somewhat curved bill is diagnostic.



Least Sandpiper



Red-backed Sandpiper

SEMIPALMATED SANDPIPER*Ereunetes pusillus* (Linnæus)

DESCRIPTION.—About as large as an English Sparrow; half-webs between the front toes, which are responsible for the bird's name. *Adults in spring:* Upperparts dark brown, plumage margined with brownish gray and traces of reddish brown; rump grayish brown; upper tail-coverts blackish; tail gray, central feathers darkest; underparts white, with faint streaking on breast. Young birds in their first fall plumage have a somewhat scaly appearance above as a result of the buffy tips and borders of the feathers; their breasts are buffy, unstreaked; bill black; feet blackish. *Length:* A little over 6 inches.

RANGE IN PENNSYLVANIA.—A migrant, commoner in the fall than in the spring, and noted chiefly at Erie. It occurs during May and from late July or early August to late September.

The legs and feet of this species are black; in the Least Sandpiper they are greenish. The bill of this species is about straight; that of the Least Sandpiper is slightly decurved at the tip; in any age or plumage the Semipalmated Sandpiper may be recognized when in the hand by its partially webbed front toes.

SANDERLING*Crocethia alba* (Pallas)

DESCRIPTION.—*Three toes;* a little smaller than Robin. *Adults in summer:* Head, back, lower throat, and sides of breast, rusty brown, the feathers edged with whitish and centered with black; wings with white area on basal half of inner flight-feathers; belly and narrow margins of tail-feathers white. *Adults in winter:* Gray above, white below, with white face and eye-ring. *Young in first winter plumage:* Whitish, streaked with black above; breast buffy; rest of underparts white. *Length:* 8 inches.

RANGE IN PENNSYLVANIA.—An abundant fall migrant at Erie from late July on; rare elsewhere.

GREATER YELLOW-LEGS*Totanus melanoleucus* (Gmelin)

OTHER NAME.—Yellow-legs Snipe.

DESCRIPTION.—Larger than Robin; legs very long and yellow; bill long, slender, and straight. *Adults:* Upperparts black; head and neck streaked with white; feathers of back spotted and barred with whitish; upper tail-coverts and tail white, barred with black; underparts white, breast spotted and sides barred with black. *Adults and young in winter:* Similar but with less striking markings both above and below; sides only slightly barred; bill and eyes black. *Length:* 14 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant throughout, to be observed at small pools and larger bodies of water from mid-April



Greater Yellow-legs

until May and from early August to latter October; not often seen in flocks.

The Greater and Lesser Yellow-legs are much alike in appearance, this species being much the larger. Their loud, clear whistles and their habit of lifting their wings high above their backs as they alight are characteristic.

LESSER YELLOW-LEGS

Totanus flavipes (Gmelin)

OTHER NAMES.—Summer Yellow-legs; Yellow-legs.

DESCRIPTION.—Remarkably similar to the Greater Yellow-legs in all respects, even in habits, but noticeably smaller, even in the field. Length: Almost 11 inches.

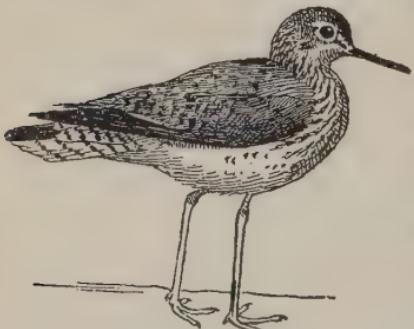
RANGE IN PENNSYLVANIA.—A fairly common and regular migrant, often commoner than the Greater Yellow-legs and more apt to be noted in small flocks. It is to be found from late April to mid-May and from early August to mid-October.

Look for the Yellow-legs along some mud-flat, preferably on an inland pool. The clear whistle may be imitated easily, and will sometimes lure the birds back after they have taken flight. Both the Greater and Lesser Yellow-legs jerk their bodies stiffly as they become uneasy.

SOLITARY SANDPIPER

Tringa solitaria solitaria Wilson

DESCRIPTION.—Smaller than Robin; flight swift and graceful; wings in flight look black. Adults: Upperparts dark olive-brown; head and neck streaked, and back finely spotted with white; middle tail-feathers dark, the others white, barred with black; underparts white, the breast streaked, the sides sometimes barred with black. In winter the birds are similar but are less streaked and spotted. Length: 8½ inches.



Solitary Sandpiper

RANGE IN PENNSYLVANIA.—Common and regular migrant from early May until about the first of June and from mid-July to early October. It sometimes occurs in midsummer and may nest, though we have no actual records at present.

The Solitary Sandpiper is confused more easily with the Spotted Sandpiper than with any other species. It *jerks stiffly* and does not bob constantly as does the Spotted when approached; the wings of the Solitary are dark, unmarked, while the Spotted Sandpiper's wings have a band of white which shows plainly in flight; and the Solitary's

bob constantly as does the Spotted when approached; the wings of the Solitary are dark, unmarked, while the Spotted Sandpiper's wings have a band of white which shows plainly in flight; and the Solitary's

tail appears white in flight, while that of the Spotted is dark. Look for the Solitary Sandpiper at small pools in woodlands, or along the grassy margins of slow-moving streams or of ponds.

The Willet and Western Willet (*Catoptrophorus semipalmatus semi-palmatus* and *s. inornatus*) rarely occur. They are large gray shorebirds, much barred with blackish above and below in spring, plain gray above in winter, the wings always with large, noticeable white patches which show plainly in flight. *Length:* 15 inches.

BARTRAMIAN SANDPIPER; UPLAND PLOVER

Bartramia longicauda (Bechstein)

OTHER NAMES.—Field Plover; Prairie Whistler.

DESCRIPTION.—Larger than Robin; tail rather long and much pointed; upperparts rich buffy; the head and neck streaked and the back barred with black; primaries dark brown, the outermost barred with white; inner tail-feathers dark brown, the outer ones buffy, all tipped and edged with white, showing plainly in the field, and all more or less barred with black and marked with noticeable subterminal band of black; underparts whitish, the breast and sides washed with buffy and marked with black in the form of delicate bars, arrow-heads, and spots; legs and feet brownish yellow. Young birds are similar but the buffy coloration is richer. *Length:* 11½ inches.

RANGE IN PENNSYLVANIA.—A rather local summer resident, found only in wide, open fields, apparently rare in western Pennsylvania, save in Mercer and Crawford counties where it nests irregularly, but fairly common in southeastern Pennsylvania, where it inhabits the wide fields in the less mountainous districts from early April to mid-September.

NEST.—A depression in the ground, usually in the middle of a large, flat, upland field, not near water. *Eggs:* 4, buffy brown, spotted with dark or reddish brown. The eggs are surprisingly large for so small a bird, as is the case in all shore-birds.

The Upland Plover is a bird of wide pastures and grassy fields. It is difficult to approach, save at the nesting season, when it may come near so as to lead us away from its young; but its presence is announced by the high and musical whistle which has given the bird one of its popular names, "Prairie Whistler," and which it utters from the ground, while in flight, or while perched on a fence-post, telegraph-pole, or tree.

The flight of this bird is singularly beautiful as, with wide wings beating through a comparatively short arc, it fairly quivers through



Bartramian Sandpiper

the air. All its movements seem tremulous and graceful, and as it alights it lifts its wings gracefully, high above its back, and folds them carefully.

Its call-note, which is heard as the bird is disturbed, is a mellow, bubbling whistle, very musical, and with a quality of liquidity which few bird-notes possess.

The young birds run about shortly after hatching and are difficult to find. They never go to the margins of streams to hunt their food, as do other members of the family, and when autumn comes they mount to the sky and make their way to the prairies of Texas where they stop for a time while *en route* to their winter home in Argentina.

If this magnificent bird is given careful protection, it may survive; but unless it is guarded in South America, as well as in its nesting-grounds, there is little hope for it.

SPOTTED SANDPIPER

Actitis macularia (Linnæus)

OTHER NAMES.—Tilt-up; Tip-up; Peep.

DESCRIPTION.—Larger than an English Sparrow, with long, narrow, pointed wings; upperparts brownish gray, with a faint greenish gloss, more or less barred with black; an indistinct superciliary line of white; face and

underparts white, *spotted throughout with black*, the largest spots on the sides and flanks; wings like back, the bases of the primaries and secondaries whitish, showing in flight; inner tail-feathers dark like back, outer ones lighter, about white, but never appearing, even in flight, as white as in the Solitary Sandpiper. Immature birds are not spotted below, and the barring of the upperparts is restricted to the scapulars and wing-coverts; there is a slight buffy gray wash on the breast. Length: $7\frac{1}{2}$ inches.



Spotted Sandpiper

RANGE IN PENNSYLVANIA.—Common summer resident throughout from mid-April

to late September. It is found along all small streams, sometimes even in the mountains and heavily wooded districts.

NEST.—On the ground, often near a stream, sometimes in a field, and made of dead weed-stalks, lined with finer materials. Eggs: 4, whitish to brownish buffy, irregularly and sometimes heavily spotted and blotched with reddish brown, usually about the larger end.

The Spotted Sandpiper is our best-known shore-bird. It is not particularly wary, and frequents all the small streams which have not been polluted. As it runs along the muddy margin, it bobs and teeters constantly, perhaps calling softly. Fluttering out over the water, its wing-tips almost touching the surface, it whistles *tweet*,

tweet, tweet, tweet, clearly, and circles back to the shore or alights on a stone or fallen tree. The white areas in the wings show rather plainly in flight.

The young are so small and flimsy that they are comical, with their wisps of tails and long, slender feet. They can swim readily, however, and run with amazing rapidity. Even the adult can swim and dive if necessary.

The Spotted Sandpiper is a much more energetic, nervous bird than its relative, the Solitary Sandpiper, and it is not so often found wading about in deep water as is that somewhat larger, darker bird. When the two species fly up, the Solitary usually utters two or three loud, sharp whistles as it flies directly away, or up into the air. The Spotted, on the other hand, usually flutters away, just a little above the water, and customarily circles back to the shore not far away.

KILLDEER

Oxyechus vociferus vociferus (Linnæus)

OTHER NAMES.—Killdee; Killdeer Plover.

DESCRIPTION.—Three toes; size of Robin; forehead, patch over eye, throat, ring around neck, and underparts white, the breast crossed by *two prominent black bands*; forepart of crown and line from bill under eye, blackish; rest of head and upperparts gray-brown, with greenish reflections; wings with bases of flight-feathers white, showing plainly in flight; rump and upper tail-coverts bright orange-brown; middle tail-feathers dark brown, outer feathers white, all with white tip and irregular subterminal bar of black; bill black; feet pale flesh-color; eyelids red. Length: 10½ inches.

RANGE IN PENNSYLVANIA.—A widely distributed migrant and summer resident from mid-March to mid-November; occasional in winter.

NEST.—A depression in the sod or among gravel, sometimes rather carefully lined with pebbles or bits of debris. Eggs: 4, whitish to buffy brown, heavily spotted with dark or reddish brown.

Our Killdeer is a bird of the open pastures. Although it searches for food along the water's edge, it often builds its nest some distance away. The striking coloration and clear whistled cry *kill-deer, kill-deer* make this one of our most easily identified birds, even at a considerable distance.

The large Black-bellied Plover (*Squatarola squatarola cynosurae*) is common during the fall migration at Erie from mid-August to mid-September and later, but is rare elsewhere in Pennsylvania.



The black underparts of the adult in spring and the *black under-wing feathers* of the young and adult in winter are diagnostic marks. The call-note may be written *too-ree*.

Somewhat smaller is the **Golden Plover** (*Pluvialis dominica dominica*), whose black underparts and golden flecked upperparts make the spring plumage easily recognizable; it is dull brownish in fall, with golden flecks on the crown and back. At Erie it is common in fall from early September throughout the month; elsewhere in Pennsylvania it is rare, and it is not noted during the spring, for its northward migration route passes along the Mississippi Valley.

SEMIPALMATED PLOVER

Charadrius semipalmatus Bonaparte

OTHER NAME.—Ring Plover.

DESCRIPTION.—Like the Killdeer in general appearance, but much smaller, and with only one black band around the neck; rump and upper tail-coverts the same gray-brown as the back; eyelids yellow; bill short, orange, tipped with black. Length: A little under 7 inches.

RANGE IN PENNSYLVANIA.—A rather rare migrant during May and from August 10 to October 1, save at Erie, where it is regular and common.

The clear call-note of this species, *ker-ee, ker-ee*, suggests that of the Killdeer. Young Semipalmated Plovers coming south for the first time are often very easy to approach.

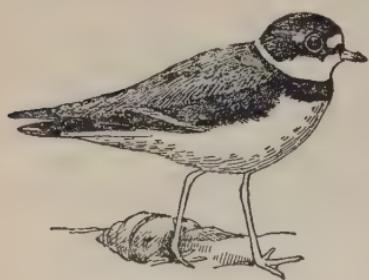
The **Piping Plover** (*Charadrius melodus*), which is about the size of the Semipalmated Plover and like it in pattern, is pale sandy above, with a blackish ring about neck, black primaries and central tail-feathers, and bright yellow eyelids and feet. This species nests at Erie, arriving in mid-April and remaining until early September; elsewhere in Pennsylvania it is very rare.

RUDDY TURNSTONE

Arenaria interpres morinella (Linnæus)

DESCRIPTION.—Size of Robin; bill sharply pointed. *Adults in spring:* Upperparts strikingly marked with black, white, and rusty red; tail white, with black band near tip; underparts white, marked with black on throat and breast. *In winter:* Upperparts blackish, the feathers margined with grayish; lower back white; tail as in summer; legs orange-red. Length: 9½ inches.

RANGE IN PENNSYLVANIA.—A rare but rather regular migrant in May and September, noted chiefly at Erie.



Semipalmated Plover

RING-NECKED PHEASANT

Phasianus colchicus torquatus Gmelin

OTHER NAMES.—Ring-neck; Pheasant; English Pheasant.

DESCRIPTION.—Size of a chicken; male with a long, pointed tail; female with shorter, more rounded tail. *Adult male:* Head and neck, with tufts on sides of head, glossy green; collar about neck white; back and scapulars golden yellow, the centers of the feathers glossy

green; rump grayish, glossed with green, and marked with black spots; wings light gray, the primaries barred with black; tail brown, barred with black and glossed with pinkish; breast rich copper-red, glossed with violet, the feathers tipped with black; sides golden yellow, spotted with glossy purple; belly black; face bare, the skin deep red;

bill and feet

light gray; eyes

bright yellow.

Female and im-

mature male:

Pale sandy

brown, the head

and neck with a

pinkish cast, and

entire upper-

parts streaked and barred with dark brown and black, giving the bird an entirely different appearance and color pattern from that of the adult male; eyes dark brown. *Length:* Male, about 30 inches; female, about 24 inches.

RANGE IN PENNSYLVANIA.—A permanent resident, very common in some districts, notably in the less mountainous counties. It is becoming common throughout much of the Commonwealth through the restocking efforts of the Game Commission.

NEST.—A depression in the ground, lined with grasses or other vegetation, usually placed in a field not far from a brush-lined stream, or under a fallen bough at the edge of a woodland. *Eggs:* 8 to 20, olive-brown in color, glossy in appearance.

The Ring-neck is a native of Asia. It was brought to Great Britain at the time of the Roman invasion and has become thoroughly acclimated there. In many parts of the New World, Ring-necks have been introduced and they seem to make their way very well. They have been present in Pennsylvania for only a few years, yet during the 1927 hunting season 177,500 of the birds were taken as legal game.

In spite of its magnificent coloration, the Ring-neck is protectively colored, though birds which wander about through the open field, where they search for food, can be seen easily. As they fly up, it sometimes takes a second or two for them to get well under way, but they fly strongly and make a difficult mark for the sportsman once they learn the meaning of a gun.



Ring-necked Pheasant, Male

BOB-WHITE

Colinus virginianus virginianus (Linnæus)

OTHER NAMES.—Quail; Partridge; Virginia Partridge.

DESCRIPTION.—Size of small bantam chicken. *Male*: Head blackish, mottled with gray and red-brown; throat, spots on neck, and a prominent line above eye, white; back and breast mottled with gray, pinkish brown, buffy, black, and white; scapulars bordered with buffy; rump and tail gray; belly whitish, barred with black; flanks rusty red, feathers margined with white. *Female*: Similar, but with buffy yellow superciliary and throat. *Length*: 10 inches.

RANGE IN PENNSYLVANIA.—Common permanent resident, chiefly in the less mountainous counties, and usually to be found in cultivated districts.

NEST.—On the ground, in high grass or among brush, made of dry grasses, arched over with grasses or other vegetation; usually placed along a road, or at the edge of a field. *Eggs*: 12 to 24, pure white.

In winter Bob-Whites frequent old weed-patches, briar-thickets, or cornfields where the stalks have been left standing. They are very sociable, and wander about in

flocks, searching for food, roosting together on the ground in a compact ring, their heads out and tails together. Being protectively colored, they usually do not fly until they are virtually tramped upon. When a flock is disturbed, they rush into the air on noisy wings and scatter in all directions. After a short time the birds begin to call to each other, *pur-lee*, *pur-lee*, and the flock reassembles.

With the coming of spring the flocks break up. Male birds mount favorite fence-posts, stones, or low boughs and give the clear whistle which every farmer boy can imitate. This whistle is one of the clearest and most powerful of bird-notes.

Male and female birds share the duties of incubating the eggs, which are turned over carefully so that they get the proper amount of heat. Sometimes the eggs are so numerous that they are piled upon each other in the nest, and at such times the lower layer of eggs must receive special attention. As a rule, all the eggs hatch.

Among the enemies of Bob-Whites are the blacksnake, which eats the eggs and young; the Cooper's Hawk and the Goshawk, which capture the adults; and the skunk and other ground-prowlers which eat the eggs and sometimes the adults. Half-starved house cats are frequently serious enemies of this popular game-bird.

The Hungarian or European Gray Partridge (*Perdix perdix*



Bob-White, Male

perdix), a bird a little larger than the Bob-White, gray in color with a dark brown horse-shoe shaped mark on the breast, a red-brown tail, and reddish eyelids, has been released in several parts of Pennsylvania as a game-bird, and it is now on the increase. The bright red-brown tail of this species is very noticeable in flight.

RUFFED GROUSE

Bonasa umbellus umbellus (Linnaeus)

OTHER NAMES.—Partridge; Gray Partridge; Birch Partridge; Silver-tail (gray phase); Pheasant (erroneous).

DESCRIPTION.—Size of chicken, with broad, fan-shaped tail; sexes similar. Uppercparts principally reddish brown, irregularly marked with black, buffy, gray, and whitish; *sides of neck with ruffs of broad, black feathers* glossed with greenish; tail reddish brown or gray, or of intermediate shade, irregularly barred and mottled with black, with a broad blackish band near end, and a gray tip; throat and breast buffy; rest of underparts white, tinged with buffy and barred with black or dark brown, the bars indistinct on the breast and belly, stronger on the sides. The female, which is a little smaller, has smaller ruffs on the neck, and, as a rule, a shorter tail. Length: 17 inches.

RANGE IN PENNSYLVANIA.—A permanent resident throughout in the wilder, wooded sections; variable in abundance as a result of unfavorable nesting seasons, change of forest conditions, destruction by natural enemies, disease, and heavy hunting.

NEST.—A hollow lined with leaves at the base of a stump, under a low hemlock, or under the fallen branch of a tree. Eggs: 7 to 14, pale buffy.

The Ruffed Grouse, our best-known game-bird, is a creature of personality. Protectively colored, he waits until he is almost trodden upon, then rises with a startling whir of wings, leaving the wayfarer thunderstruck. The female, as she incubates, is rarely seen, for she does not stir, and her back perfectly imitates her surroundings.

In the spring, the male Grouse struts and drums at chosen spots in the woodland. On a log he paces up and down, ruffs lifted, wide tail fully spread and elevated; or he stands erect, and, beating his chest rapidly with his wings, produces the drumming sound for which he is so famous. Grouse may drum at any time of the year, and sometimes at night, but they do so chiefly during the morning on spring days.

The young run nimbly soon after hatching and leave their nest



Ruffed Grouse

at once. They develop rapidly. After a week they can fly readily though they are very small. The mother Grouse, in luring an enemy from her young, employs broken-wing tactics, dragging herself over the ground as though she were badly wounded.

In the winter, Grouse develop long lateral scales on their toes which function as snow-shoes. Their neat tracks in the snow lead from a roost under a branch to which dead leaves cling, and wander about the bushes and trees where the birds have been feeding on buds, twigs, and dried berries. Grouse are especially fond of aspen, birch, beech, and maple buds. They like wild-grape vines both for the food and the shelter which they afford. During summer, Grouse eat much insect food, as well as berries and leaves. They sometimes eat hemlock needles and leaves of mountain laurel.

WILD TURKEY

Meleagris gallopavo silvestris Vieillot

DESCRIPTION.—Size and appearance very similar to that of the domestic bird, but tips of tail-feathers and upper tail-coverts rich deep chestnut; primaries barred with black and white; feet mahogany-red. A large Wild Turkey gobbler in spring is a magnificent creature with its rich, iridescent plumage, highly colored and wattled head, and proud carriage. *Length:* About 4 feet.

RANGE IN PENNSYLVANIA.—Once fairly common throughout the State, especially in the southern mountainous counties, but brought to the verge of extermination through forest fires, excessive hunting, and encroaches of civilization. The Game Commission has brought in some birds from other States to replenish our stock; some mingling has occurred between wild birds and domestic individuals which have wandered from the farms. Wild Turkeys are now to be found chiefly along the ridges of the South Mountain District, and seem to be holding their own fairly well. While these are not strictly the original strain, they are nevertheless wild, and are therefore fairly representative of the race which once occurred. The Wild Turkey is a permanent resident.

NEST.—A depression in the leaves, under brush, or in a thicket, usually well concealed from above. *Eggs:* 6 to 15, cream-buff, thickly but finely spotted with reddish brown.

The sight of a flock of Wild Turkeys coasting on their strong wings from the crest of a ridge to the lower levels is one long to be remembered. The spectacle before us, of weighty, muscular creatures hurling themselves through the air is difficult to believe, accustomed as we are to the flightless clumsiness of their cousins of the barnyard.

Having very keen senses, the Wild Turkeys are difficult to approach, for they are very wary and at the slightest warning make off on a run up the ridge, or leap into the air.

In summer, they eat many small fruits and insects, including grasshoppers, but in winter, when it is often necessary for them to scratch in the snow, they eat chestnuts and acorns, the berries of

Jack-in-the-pulpit, corn if they live near the farms, and other such food as they can find. In some districts these splendid birds have difficulty in finding adequate food to carry them through the winter and in such regions the Game Protector sees that the birds are fed, and Boy Scouts, sportsmen's organizations, and others coöperate in saving the birds.

The Wild Turkey gobbler, notably in the spring, has the same tendencies toward fighting and vainglorious display as has his domestic relative.

MOURNING DOVE

Zenaidura macroura carolinensis (Linnæus)

OTHER NAMES.—Carolina Dove; Rain Crow (erroneous); Turtle Dove.

DESCRIPTION.—A little larger than a Robin; head small, tail long and pointed. *Adults*: Crown clear gray; front of head, face, throat, and lower neck, soft reddish brown, two small black spots back of and below the eye; sides and back of neck gray, with patches of iridescent feathers which reflect greenish, golden, and purplish lights; back and wings grayish brown, some of the coverts and tertials with black spots; rump and tail gray, the outer tail-feathers noticeably tipped with white; underparts pinkish brown, lightest on belly and under tail-coverts; bill black; feet reddish. *Female*: Less brightly colored than male. Young birds in their first flight plumage are much scaled in appearance and lack the bright colors of the adult. *Length*: About 12 inches.

RANGE IN PENNSYLVANIA.—A common summer resident throughout, arriving in late March and remaining until November. It is occasionally found in winter when the ground is free of snow or when food in the form of seed or grain is plentiful. In many sections it is becoming commoner.

NEST.—A flimsy, flat structure made of small twigs, weed-stalks, or other bits of vegetation, placed, usually, on a horizontal branch or in an ample crotch in an orchard tree or willow, often near a stream, and usually not at great height from the ground. The nest is sometimes placed on the ground. *Eggs*: 2, white.

Doves are often to be seen perched on a prominent dead branch, and at such times their small heads, erect posture, and pointed tails are noticeable. As they fly up from a field, or alight, the white in their outer tail-feathers shows plainly, but wherever they occur they may be recognized by the characteristic whistling sound of their wings in flight and their gentle cooing. This song may be written *coo-oo-oo, ooh, ooh, ooh*, the opening syllable using three notes, the middle note being the highest in the song. At close range this



Mourning Dove

cry is rough and throaty; at a distance it is mellow and soft, its tender, mournful quality making adequate description difficult.

Young Doves are fed with partly digested food which the parents pump up from their stomachs. They are helpless, dowdy creatures while in the nest, and they sometimes come to an untimely end when a gale blows the structure from its scant moorings or when, from lack of proper balance, it topples to one side.

The white eggs, when fresh, are translucent as moonstones, and the sunlight, in penetrating the thin shells, discloses faintly the color of the golden yolk.

Doves eat a great deal of weed seed. They have no destructive habits whatever, and are worthy of all possible protection. They appear to be on the increase as a result of shortening the shooting season in the South, where they are popular as game-birds.

TURKEY VULTURE

Cathartes aura septentrionalis Wied

OTHER NAMES.—Buzzard; Turkey Buzzard.

DESCRIPTION.—Smaller than a Turkey; head and upper neck virtually bare; ruff of feathers about lower neck; wings long as in most birds of prey, but feet without the sharp, curved claws of the hawk tribe; plumage blackish

brown, glossed with purplish when fresh, rusty and soiled in appearance when old; under surface of flight-feathers lighter, showing in flight; skin of neck and head reddish, with whitish tubercles and ridges, and some hairs and small feathers; bill whitish; feet dull flesh-color; eyes brown. Downy young, white in color with pale blue-gray feet and head. Length: About 30 inches.

RANGE IN PENNSYLVANIA.—A regular and fairly common summer resident in the southern half of the Commonwealth and locally in western Pennsylvania, at least as far north as Crawford County, where it nests in limited numbers at Pymatuning Swamp. It arrives in mid-March and stays until November, or later. In the southernmost counties, and occasionally elsewhere in its range, it remains throughout the winter.

NEST.—No nest is built. Eggs: 2, whitish, blotched irregularly with black, brown, and gray, placed on the ground in a cavity among rocks or in a hollow log.

At close range the Turkey Vulture is not a beautiful creature—its carriage is slovenly, its facial expression unpleasant, and its



Turkey Vulture

plumage harsh; but circling in the sky, its wide wings hardly moving for hours at a time, it becomes a glorified being, among the most graceful and well-balanced of our soaring birds.

It is equipped by Nature as a carrion-eater, the bare head and neck permitting it to eat the flesh of dead animals without soiling its feathers. Its feet are not used in capturing or carrying prey, but a considerable burden may be carried in the bill. When Vultures find a dead cow or horse, word seems to travel immediately to all nearby districts and the great birds swing silently in to the feast. They are frequently seen along roadsides where they devour rabbits and other small mammals which have been killed by motor cars.

It is said that the Turkey Vulture carries the germs of hog cholera and the dreaded foot-and-mouth disease. This is only occasionally, if ever, true, however, and, as a rule, it is a harmless and highly beneficial bird. Nevertheless, it is not protected in Pennsylvania at the present time.

Young Vultures cannot stand when newly hatched.

MARSH HAWK

Circus cyaneus hudsonius (Linnæus)

OTHER NAMES.—Swamp Hawk; Marsh Harrier; Pigeon Hawk (erroneous); Chicken Hawk; Hen Harrier.

DESCRIPTION.—Face with an owl-like ruff of feathers; wings and tail long; feet long and slender. *Adult male*: Upperparts light ashy gray, somewhat darker on top of head, and slightly streaked on neck; tips of wings black; tail barred with black; *upper tail-coverts white*; lower parts white, grayer on throat and upper breast, and flecked with pale reddish brown on sides and flanks; eyes bright yellow. *Adult female*: Plumage rich brown, considerably mottled throughout, sometimes heavily streaked with blackish below, and feathers sometimes considerably margined with buffy; *upper tail-coverts always white*; eyes yellow. Immature birds are usually plain brown, unstreaked below, and have brown eyes. The feet are always yellow. Length: About 20 inches.

RANGE IN PENNSYLVANIA.—A common though somewhat local migrant and summer resident from March 15 to November 1. Less often seen in the mountainous counties and occasionally noted in winter. Its summer range



Marsh Hawk
Male Female

depends more or less upon swampy country in which the nest is characteristically built.

NEST.—On the ground in a swamp, composed of dead weed-stalks, cat-tail leaves, and similar materials, sometimes with neat cup and lining, at other times loosely constructed with little attempt at neatness. *Eggs:* 4 to 7, pale blue or chalky white, occasionally faintly spotted with brown.

The Marsh Hawk is usually to be seen flying near the ground over a field or low meadow. Beating its way along rapidly, it pauses at times to watch the grass where prey may hide, sometimes wheeling suddenly toward the ground as it captures a mouse or shrew. It may always be recognized by the *white upper tail-coverts* which show plainly in flight, a mark which our other hawks do not have.

Occasionally the Marsh Hawk circles high in air where the white patch on the back is not visible. At such times the *long and somewhat pointed wings*, black wing-tips, long tail, and white appearance of the male and the dull brown appearance of the female will distinguish the species.

The male has the interesting custom of looping the loop during its season of courtship. At the nest the birds are very fierce in defending their young and swoop about the intruder, uttering loud, piercing, Flicker-like cries.

Its food consists of mice, frogs, snakes, and other creatures which are captured among the cat-tails or on the ground. Occasionally it takes a bird or visits the poultry-yard, but, as a rule, it is a beneficial species. It is not protected in Pennsylvania.

SHARP-SHINNED HAWK

Accipiter velox (Wilson)

OTHER NAMES.—Bird Hawk; Blue Darter; Chicken Hawk; Pigeon Hawk (erroneous).

DESCRIPTION.—Small for a Hawk, being but little larger than a Robin; wings comparatively short and rounded; tail long and *square at tip*; female considerably larger than male. *Adults:* Top of head and neck blackish, base of feathers of nape white; cheeks and malar region whitish streaked with reddish brown; throat white, finely streaked with black; upperparts bluish-gray, the tail marked with three or four blackish bands; underparts white, heavily barred with reddish brown save on middle of belly and under tail-coverts. *Immature birds:* Brown, not gray, plumage of the upperparts edged with rusty brown and underparts *streaked*, not barred, with dark brown. The eyes of adults are usually red; of immatures, yellow. The feet, which are long and slender, are always yellow. *Length:* Male, 12 inches; female, 13½ inches.

RANGE IN PENNSYLVANIA.—A migrant and summer resident throughout from March 1 to November 25; occasionally to be seen in winter.

NEST.—A rather large, flat platform made of slender twigs, built near the trunk on a hemlock bough, or in other sheltered situation, usually 30 to 40 feet from the ground. *Eggs:* 4 to 6, pale greenish white, handsomely and irregularly blotched with rich brown.

The Sharp-shin is the enemy of all small birds. It is swift in flight and skulks along among the bushes, pouncing upon its victims suddenly. Near the nest of a pair of these birds located at McDonald Water Works, Washington County, there were no small birds—they had probably all been killed or driven out by the Sharp-shins.

Another very small member of this family, the Sparrow Hawk, is a bird of the open fields, with long, *pointed* wings and red-brown back. The Sharp-shin sometimes circles rapidly in the open but does not hover over its prey as does the Sparrow Hawk.

Young Sharp-shins, which are downy white, are fed upon small birds which are neatly plucked by the parent.



Cooper's Hawk, Female
Sharp-shinned Hawk, Male

COOPER'S HAWK

Accipiter cooperi (Bonaparte)

OTHER NAMES.—Chicken Hawk; Blue Darter; Pigeon Hawk (erroneous); Hen Hawk.

DESCRIPTION.—Almost precisely like the Sharp-shin in proportions and coloration, but larger, the smaller male bird usually being a few ounces heavier than the largest female Sharp-shin, but not always to be distinguished easily from that species in the field. In the hand the Cooper's Hawk may always be recognized by the shape of the tip of the tail which is *rounded*, not square, as it is in the Sharp-shin. Length: Male, 16 inches; female, 19 inches.

RANGE IN PENNSYLVANIA.—A fairly common summer resident in wooded sections from March 1 to December 10; occasional in winter.

NEST.—A bulky mass of twigs, lined with flakes of bark, usually placed from 40 to 60 feet from the ground in a beech tree. Eggs: 3 to 6, chalky blue-white.

The Sharp-shinned and Cooper's Hawks, both bird-killers, are fairly common and are to be rated as our most objectionable birds of prey. They are not protected in Pennsylvania.

GOSHAWK

Astur atricapillus atricapillus (Wilson)

OTHER NAMES.—Hen Hawk; Gray Hawk; Partridge Hawk; Squirrel Hawk; Chicken Hawk.

DESCRIPTION.—A large, heavy-bodied Hawk, with comparatively short wings and long tail; female considerably larger than male. Adults: Crown

black; area above and back of eye white, marked irregularly with black; rest of head whitish, streaked with black; upperparts blue-gray, the tail marked with three or four broad blackish bands; underparts heavily and

finely barred with clear gray *throughout*, also somewhat streaked, particularly on the breast; eyes red or red-brown; cere and feet yellowish green. *Immature birds:* Brown, not gray; plumage of upperparts dark brown, margined and edged with buffy and whitish, and on wing-coverts with rusty brown; underparts buffy white, heavily streaked with blackish. *Length:* Male, 21 inches; female, 24 inches.

RANGE IN PENNSYLVANIA.—Rare as a permanent resident in the northern, more mountainous counties; known to have nested at seven localities. As a winter visitant, irregular, though in some sections, notably among the eastern counties, to be found with some regularity from about October 20 to March 1.

NEST.—A large mass of sticks, with a shallow cup, lined with bark and occasional sprigs of green hemlock, placed from 40 to 60 feet up in a beech or hemlock tree. **Eggs:** 3 to 5, chalky white, with a faint bluish cast.

The Goshawk is our most savage destroyer of small game. In occasional winter invasions it is abundant, and at such times takes a terrific toll of Ruffed Grouse, Ring-necked Pheasants, poultry, and cotton-tail rabbits.

In the field, it has a very gray appearance, more so than any other species; even its heavily marked underparts, at a distance, are gray. It does not often circle in the sky, preferring to fly at about the level of tree tops, or, indeed, a few feet from the ground, so as to drop upon unsuspecting prey.

The parent birds are formidable warriors when their nest is disturbed. While I was making notes at a nest in Potter County, the heavy female bird struck me on the head, shoulders, and back a dozen times with her large feet. The male was wary, though he joined in the battle occasionally.

Rarely does the Goshawk capture mice or other destructive small mammals, eating virtually nothing but Grouse so long as these birds can be found. It is not protected in Pennsylvania.



Goshawk

RED-TAILED HAWK

Buteo borealis borealis (Gmelin)

OTHER NAMES.—Chicken Hawk; Hen Hawk.

DESCRIPTION.—Large, with broad wings and comparatively short tail; often seen circling in the sky or perched on a prominent dead stub; female

larger than male. *Adults:* Upperparts dark brown, glossed with violet on back; scapulars and wing-coverts somewhat barred with buffy brown; throat white; breast usually crossed by a brownish band or by a row of streaks; rest of underparts whitish, barred and streaked with blackish, particularly on flanks and sides; tibial feathers buffy; tail bright red-brown with white tip and subterminal band of black; eyes dark brown; feet and cere greenish yellow. Immature birds are similar but the plumage of their upperparts is considerably mottled and edged with buffy, and the tail is gray, crossed with many narrow black bands. The underparts are often more heavily marked than in the adults, and the eyes are grayish yellow, not dark brown. *Length:* Male, 20 inches; female, 23 inches.

RANGE IN PENNSYLVANIA.—Fairly common permanent resident, save at high altitudes, where it is to be found only irregularly during winter. Some Red-tails migrate into or through Pennsylvania during fall and early winter, but it is now believed that most nesting birds actually remain in one region during the entire year. In many sections of the State it is becoming rarer each year.

NEST.—A bulky affair of twigs and branches, lined with leaves and finer materials, placed usually in a large, high, deciduous tree, at from 50 to 80 feet from the ground. *Eggs:* 2 or 3, whitish, irregularly blotched and spotted with reddish brown.

The Red-tail may easily be confused with the Red-shoulder, which, while smaller, has the same proportions. The Red-shoulder is more often found in swampy country or in the lowlands; the Red-tail is a bird of the fields and open wood-lots. The Red-shoulder's scream is clear and loud; that of the Red-tail is wheezy and often whistle-like in quality. The Red-shoulder's flight is more rapid, at times more owl-like than that of the Red-tail, and, of course, the Red-shoulder's tail is never red-brown, but is black, crossed with narrow white bands. Immature Red-shoulders are to be distinguished from immature Red-tails with difficulty, partly because the birds do not call much and partly because there is variation in the size of the sexes—a small male Red-tail being not much larger than a female Red-shoulder; in the hand, however, the young Red-shoulder is more conspicuously *streaked* below than is the young Red-tail, and the feet are *always* slenderer and more delicate than in the larger species.

The Red-tail's food habits are, for the most part, innocent; nevertheless, it is not protected in Pennsylvania at the present time.



Red-shouldered Hawk
Red-tailed Hawk

RED-SHOULDERED HAWK

Buteo lineatus lineatus (Gmelin)

OTHER NAME.—Chicken Hawk.

DESCRIPTION.—Smaller than the Red-tail, with broad wings and comparatively short tail. *Adults:* Head and neck dark brown, streaked with reddish brown; back dark brown, with irregular barring and edging of gray and whitish; wings black, barred and spotted with white, lesser coverts rich reddish brown; tail black, crossed with three distinct but narrow white bands; underparts reddish brown, barred on belly, sides, and flanks with white; throat whitish, streaked, not barred, with dusky; a black spot on malar region; under tail-coverts white; feet and cere greenish yellow; eyes dark brown. *Immature birds:* Dark brown above, neck and back streaked and spotted with whitish and buffy; lesser wing-coverts reddish brown; primaries edged with buffy brown; tail gray-brown crossed with several light bars; underparts buffy white, streaked with black, principally on breast, sides, and belly; eyes pale grayish, with a yellow cast. *Length:* Male, 18½ inches; female, 21 inches.

RANGE IN PENNSYLVANIA.—A somewhat local summer resident from March 1 to December 1, often found along river valleys or in swampy country; winters occasionally, chiefly in the southern half of the Commonwealth. Usually not so common as the Red-tail.

NEST.—Of twigs, lined with leaves and other fine materials, *and usually with a sprig or two of fresh hemlock*, built in a hemlock, beech, or other forest tree, usually from 30 to 60 feet from the ground. Sometimes the Red-shoulder adds materials to the last year's nest of a Crow and uses this structure as a nest. *Eggs:* 3 to 6, pale greenish white, irregularly blotched with dark reddish brown.

Even at a distance the bright reddish coloration of the underparts of the adult Red-shoulder should serve to distinguish it. The bird student will do well to remember that the Red-shoulder and Red-tail customarily choose prominent perches from which to watch for prey, whereas the Cooper's Hawk, Sharp-shin, and Goshawk almost never choose such lookout posts. A large Hawk seen on a dead stub in the open is almost certainly either a Red-shoulder or a Red-tail. The flying Red-shoulder circles more rapidly than does the Red-tail, and with a glass the dark, white-barred tail should be seen easily.

It is fond of snakes, frogs, and mice, which it captures usually in the lowlands. Occasionally it catches a bird or young poultry, but it visits the farms only when food is scarce in its wilder habitat. Young Red-shoulders whose stomachs I examined at Pymatuning Swamp had eaten only grasshoppers, field-mice, snakes, frogs, and beetles.

The Red-shoulder's loud, clear scream, when familiar to the bird student, is diagnostic. The Blue Jay can imitate this scream almost perfectly, however, so the bird student must use care in recording the species from call-note alone. This species, while for the most part innocent in food habits, is not protected in Pennsylvania.

BROAD-WINGED HAWK

Buteo platypterus platypterus (Vieillot)

OTHER NAMES.—Chicken Hawk; Pigeon Hawk (erroneous).

DESCRIPTION.—The Broad-wing, because of its name, is often thought to be one of our largest hawks, but in reality it is one of the smaller species, being about the size of a Crow. *Adults:* Gray-brown above; throat white; malar region blackish; tail crossed with three distinct and rather broad white bands; underparts warm brown, the belly and sides heavily barred with white, the under tail-coverts largely whitish; cere and feet yellowish green; eyes dark brown. *Immature:* Dark brown, with head and neck considerably streaked; wing-coverts edged with buffy white; underparts buffy white, heavily streaked with black; tail grayish, marked with five or six black bands. *Length:* Male, 16 inches; female, 17 inches.

RANGE IN PENNSYLVANIA.—An uncommon and local summer resident from about April 20 to October 1. This hawk is *not found* in winter in Pennsylvania, for it migrates to Central America during the cold months.

NEST.—A platform of sticks, usually placed in a large crotch of a deciduous tree, and not often at great height from the ground. An old Crow nest is sometimes used. *Eggs:* 2 to 4, whitish, spotted and blotched, sometimes very handsomely, with rich brown.

A small hawk with wide wings, short tail, and the general appearance of a Red-tail is likely to be a Broad-wing. Look for it about deciduous woodlands. Its scream is feeble. It nests in woodlands not far from Pittsburgh.

ROUGH-LEGGED HAWK

Archibuteo lagopus sancti-johannis (Gmelin)

OTHER NAME.—Chicken Hawk.

DESCRIPTION.—Larger than a Red-tail; two distinct types of plumage, one light, one dark; feet, *down to the very toes*, fully feathered. *Light phase of plumage:* Head and neck black, boldly streaked with white; back dark brown; tail white at base, black on terminal third; breast and throat buffy, broadly streaked with black; feathers of leg buffy, spotted with blackish; belly and under tail-coverts black; wing-linings white, with black spots at wrist and black tips on all primaries and secondaries; cere and feet yellowish; eyes dark brown. *Dark phase:* Brownish black, spotted irregularly with white on belly, the tail marked with three or four narrow whitish bands. *Length:* About 22 inches.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitor from the far North, usually seen in the more northerly counties and in fairly open country.

The great Rough-leg will perch on a hay-stack or a low stump in an open field in preference to a high stub. In searching for prey, it beats over the ground in the manner of the Marsh Hawk. It is distinctly beneficial in food habits. In any plumage the bird in the hand may be recognized by the feathered feet; in the field the distinctly black underparts are diagnostic. Unfortunately, this species is not protected at the present time in Pennsylvania.

GOLDEN EAGLE

Aquila chrysaëtos chrysaëtos (Linnæus)

DESCRIPTION.—Size very large; wing-spread from 6 to 8 feet; female noticeably the larger. *Adults:* Plumage rich deep brown, save on crown, nape, and hind neck where the pointed feathers are golden brown, and on the basal half of the tail, which is barred with whitish or gray; cere and toes yellow; bill blue-black; eyes dark brown; tarsus, which is fully feathered down to the toes, white or pale buffy. *Immature:* Similar, but the basal half or two-thirds of the tail is white and the under tail-coverts are margined with buffy. *Length:* About 3 feet.

RANGE IN PENNSYLVANIA.—A winter visitant, usually rare, though sometimes recorded several times during a single season. It is most often to be seen in the mountainous counties.

The Golden Eagle is occasionally caught in steel traps which have been set for foxes or other fur-bearers. Each winter one or two of these great birds are thus made captive or shot by farmers who are protecting their poultry.

It is a magnificent creature, with its regal bearing, its deep set, brilliant eyes, and its sleek, lustrous plumage. In captivity it is not given to beating itself about, but bears itself with simple dignity, as though it understood the futility of trying to make an escape.

In the field, it is to be distinguished with difficulty from the immature Bald Eagle, the latter bird having white areas on the under wing which the Golden Eagle lacks. Close at hand, it will be noted that both birds have long feathers on the tibial region, the tips of these feathers sometimes reaching well toward the toes, but in the Golden Eagle the whole foot, down to the toes, is covered with short, thick plumage.

The Golden Eagle has been known to kill foxes and lambs. There is an authentic record of the killing of a sturdy, though small, fawn by one of these great birds. Pursuing the fawn through the woods, it frightened it over a sharp declivity, and its leg was broken in the fall. The Eagle's long, vise-like talons and great bill finished the unfortunate creature.

BALD EAGLE

Haliæetus leucocephalus leucocephalus (Linnaeus)

OTHER NAMES.—American Eagle; White-headed Eagle.

DESCRIPTION.—Size very large, a wing-spread of over 6 feet. *Fully adult birds:* Brownish black with head and neck, tail, and upper and under tail-coverts, white; bill clear bright yellow; feet dull yellow; eyes bright pale yellow. *Young birds in their first plumage:* Almost black, with irregular mottling of white on underparts; bill and cere dusky; eyes dark brown. In somewhat older young the plumage is much mottled with white, buffy, and grayish on the upperparts as well as below, and the under wings are blotched with white. As the bird grows older the light areas become more extensive.

In the fourth year the head and tail become pure white and the mottling of the rest of the plumage does not reappear. Immature Bald Eagles sometimes have the general appearance of a Golden Eagle, but the feathers of the feet *never* extend down to the toes, as they do in the Golden Eagle. *Length:* A little under 3 feet.

RANGE IN PENNSYLVANIA.—Rare and irregular migrant and summer resident (occasionally noted in winter), save at Erie, where it is fairly common. Here it searches for fish and refuse along the shore and nests in the vicinity. In October and November, Bald Eagles from the North Country migrate through Pennsylvania, following some of the ridges of the eastern counties. They are sometimes noted along the Susquehanna and Delaware rivers, where formerly, and perhaps in limited numbers today, they nest on the larger wooded islands.

NEST.—A huge mass of sticks and débris, sometimes a wagon-load or more, built into the principal crotch or top of a sycamore or other large tree, often at great height from the ground. *Eggs:* 2 or 3, chalky white.

The Bald Eagle is usually seen along waterways or in the mountains. It ranges widely and flies with great majesty, its wide, heavy wings giving it, even at great distance, the appearance of weight and strength.

It is fond of carrion and pursues the smaller Osprey or Fish Hawk until that bird is forced to give up the prey which it has captured. Bald Eagles rarely take poultry. They sometimes pursue water-fowl, but in Pennsylvania do not destroy much game or valuable wild-life and are therefore protected.

The cry of the Bald Eagle is a barking squeal, sometimes very high and thin, often scarcely to be heard.

A dark-colored Eagle with white patches showing on the under-wing is likely to be an immature Bald Eagle. The Golden Eagle almost always appears dark from below, save for the basal half of the tail, which is grayish or white.

DUCK HAWK

Rhynchodon peregrinus anatum (Bonaparte)

OTHER NAMES.—Peregrine Falcon; Rock Hawk; Bullet Hawk; Blue Hawk; American Peregrine; Ledge Hawk.

DESCRIPTION.—Size medium; female much larger than male; wings long and pointed; plumage very firm and stiff. *Adults:* Top of head and patch below eyes and on rear part of cheeks, black; back, wings, and tail bluish slate, heavily barred with darker gray; tail tipped with white; underparts



Bald Eagle, Adult

buffy, barred and spotted with black, chiefly on sides and flanks. *Immature:* Upperparts dark brown, the plumage considerably margined with buffy or pale brownish; area below eye black; cheeks brownish; underparts dark brown, all the feathers widely margined with buffy, giving a mottled and streaked appearance; cere and feet yellow; eyes very dark brown. *Length:* Male, 16 inches; female, 19 inches.



Duck Hawk, Adult

RANGE IN PENNSYLVANIA.—A rare summer resident from March to November along cliff-lined rivers. It occasionally occurs in migration and has been known to winter in the Philadelphia region, where the solitary birds live upon pigeons, and roost on the ledges of tall buildings.

NEST.—None is made. *Eggs:* 3 to 6, whitish, heavily spotted with rusty or chocolate-brown, or solid brown, laid either on the bare rock in a sheltered niche on a high cliff, or in a slight depression in the earth on such a ledge, if there be any soil.

This is one of Pennsylvania's rarest hawks. Along the Juniata River, and where there are cliffs along

the Delaware and Susquehanna rivers, they are sometimes seen beating their way buoyantly, high in the air, or plunging down from the heights either in pursuit of prey or in play. Their call-note, a sharp and rapidly repeated *kee, kee, kee, kee* echoes among the rocks. Near their nest the birds are vicious toward intruders.

For speed and daring, the Duck Hawk is famous. It pursues and captures the most rapid ducks, even Teal. I have seen it kill Pileated Woodpeckers and Crows, but, as a rule, it captures Meadow-larks, Blue Jays, Robins, and shorebirds which happen to pass by its eyrie, or for which it watches from its high vantage-point. It is particularly fond of domestic pigeons if there be any in the vicinity, and will live almost exclusively upon them as long as the supply lasts. Striking its prey with closed fists, it slashes the skin open with the long claws of the hind toe.

Sometimes a Duck Hawk may be seen from the train window in the vicinity of Huntingdon, Spruce Creek, Palmerton, or Dauphin. The Duck Hawk is not protected in Pennsylvania.

PIGEON HAWK

Tinnuculus columbarius columbarius (Linnæus)

DESCRIPTION.—Size small, a little larger than a Sparrow Hawk, but heavily built, and with plumage firm like that of the Duck Hawk. *Adults:* Blue-gray, narrowly streaked with black above, an inconspicuous band of buffy or pale reddish brown at neck, primaries barred with white; tail black-

ish with three or four distinct, though narrow, white or grayish bars, and a white tip; underparts buffy or rich ochraceous, streaked with black, save on throat. *Immature:* Dark brown above, the primaries and tail barred with buffy; underparts much as in adult birds; cere and feet yellow; eyes black. *Length:* About 10 inches.

RANGE IN PENNSYLVANIA.—A rare migrant, additional records for which are very desirable. It usually occurs in late April and early May and in late September and early October. It is said to have nested in Pike County.

So many hawks are called Pigeon Hawk that it is difficult to make Pennsylvania farmers and gunners realize that this little hawk is really a comparatively rare bird. It flies rapidly, directly, and is, in general appearance, much like a Sparrow Hawk with a blue-gray back.

I have noted Pigeon Hawks in Pennsylvania only a few times. Each time the hawk was surrounded and besieged by a flock of swallows, one of which it may have been holding in its talons.



Sparrow Hawk, Male
Pigeon Hawk

SPARROW HAWK

Cerchneis sparveria sparveria (Linnæus)

OTHER NAMES.—Mouse Hawk; Killy Hawk; Pigeon Hawk (erroneous).

DESCRIPTION.—Size small, not much larger than a Robin; adults and young alike; wings pointed. *Male:* Top of head blue-gray, with rusty brown crown-patch; sides of head buffy or whitish, with black marks below eye, on ear-coverts, and on side of nape; back rich reddish brown, barred on scapulars, and sometimes on back, with black; wing-coverts blue-gray, spotted with black; primaries black, barred with white; tail rich rufous, tipped with white, and with a broad subterminal bar of black; underparts whitish or buffy, sometimes quite reddish, with spots or bars of black on sides and flanks; cere and feet yellow; eyes dark brown. *Female* quite different, having the back and tail heavily barred with black, the wing-coverts reddish brown barred with black, and the underparts streaked with pale reddish brown. *Length:* About 10 inches.

RANGE IN PENNSYLVANIA.—A common and widely distributed summer resident from March 10 to November 15. Occasional in winter.

NEST.—In a cavity in a tree or in a bird-box from 20 to 40 feet from the ground. *Eggs:* 4 to 8, buffy or whitish, heavily spotted with reddish brown.

The trim form of this elegant creature is a familiar roadside acquaintance, and the piercing *killee, killee, killee* of the bird, as it hovers looking for prey, is characteristic. The Sparrow Hawk is distinctly beneficial, feeding upon grasshoppers, field mice, and other small mammals. It is protected by law at all times in Pennsylvania.

OSPREY; FISH HAWK

Pandion haliaëtus carolinensis (Gmelin)

DESCRIPTION.—Size large, wings long, giving the bird in flight somewhat the appearance of a gull; feet large, the outer toe reversible, the under side of the toes with spiny scales for holding slippery prey; upperparts blackish brown, the feathers margined with brownish; nape and superciliary white or whitish spotted with black; tail with from six to nine grayish bands, noticeable particularly on the inner web; underparts shining white, with spots of brown on breast, particularly in the female. The under wings are white save the greater coverts and flight feathers which are prominently barred; a black area at the bend of the wing; bill black; feet pale blue-gray; eyes orange-yellow. *Length:* 23 inches.

RANGE IN PENNSYLVANIA.—Common and regular, principally along the waterways, as a migrant in April and May and in September and October. Rare and local as a summer resident. Additional nesting records are desirable.

NEST.—A bulky mass of sticks and débris, usually placed in a dead tree, sometimes at the very top, from 20 to 50 feet from the ground. *Eggs:* 2 to 4, whitish, spotted with reddish brown, or solid rich brown. There is much variation in the color of the eggs.

The Osprey is usually seen near a lake or waterway. Its easy flight gives it somewhat the bearing of a gull, but its broad, barred tail and dark upperparts distinguish it even at a great distance.

The Osprey's food is almost altogether fish. Its firm, glossy plumage, its great claws, its slender, long wings, are all adapted to the capture of fish, upon which it pounces from the air, plunging into the water, sometimes to be lost to view for a second or more. Occasionally it grips a fish so large that it cannot extricate its talons, and is dragged to an unfortunate death. When the Osprey rises from a plunge in the water it often halts in mid-air to shake itself free of water, a somewhat amusing performance.

Although the Osprey eats fish almost exclusively, it is protected in Pennsylvania. It sometimes captures the destructive carp which is such a pest in some localities. It does not often take trout or other valuable food or game-fish and never captures birds or game. Smaller birds, such as grackles, fear the Osprey so little that they have been known to build their own cradles among the foundation material of the Osprey's bulky eyrie. Along the Atlantic Coast Ospreys sometimes nest on the ground.



Osprey

BARN OWL

Tyto alba pratincola (Bonaparte)

OTHER NAMES.—Monkey-faced Owl; Golden Owl.

DESCRIPTION.—Larger than a Crow; face with round ruff of feathers about eyes; legs very long and lanky, with sparse feathering down to tips of toes. Face white, with reddish brown area about eye and narrow ring of reddish brown at outer edge of facial disc; upperparts golden brown, much variegated with fine gray barring and black and white speckling; underparts white, buffy, or ochraceous, finely spotted with black. The under surface of the wings is principally white, but the flight-feathers, as well as the tail, are narrowly barred with dark gray; bill pale flesh-color; eyes black. *Length:* 18 inches.

RANGE IN PENNSYLVANIA.—A fairly common though somewhat local summer resident, chiefly in the southern and southeastern counties, and only rarely in the northern and mountainous counties and at high altitudes, from late March to November; occasional in winter. In the western counties it has been known to nest as far north as Crawford County.

NEST.—In a large cavity in a tree, often a sycamore, or in a barn or loft wherever the eggs may be laid with safety. *Eggs:* 5 to 9, white.

When a country newspaper announces the capture of a creature, half monkey and half bird, the bird student may be fairly certain that someone has found a Barn Owl. The strange, melancholy expression of the bird's face, its peculiarly awkward, long legs, and its odd habit of bowing, hissing, and swaying back and forth, all make it an object of great curiosity.

The Barn Owl can see perfectly by day, though it is chiefly nocturnal. It preys upon rats, mice, and shrews principally, and is almost altogether beneficial in its food-habits. All Owls have the habit of throwing up wads of indigestible matter, such as the bones and fur of the mice they have eaten. An examination of the pellets of the Barn Owl has shown that these creatures eat but very few birds and virtually no game.

Half-grown young in their nest, clamoring for food, make a considerable outcry. They have insatiable appetites and during early summer the parents are kept busy bringing in rats and mice for their hungry offspring.

The Barn Owl's golden brown and gray back, its white appearance beneath, and its *lack of any ear-tufts* are good field-marks. This species is protected in Pennsylvania.



Barn Owl

LONG-EARED OWL

Asio otus wilsonianus (Lesson)

OTHER NAMES.—Cat Owl; Cedar Owl; Hoot Owl.

DESCRIPTION.—Size medium, about that of a Crow; head with two prominent tufts of feathers which are nearly always held erect in life; feet fully feathered. Upperparts gray, mottled with buffy brown and speckled with black and white; tail with six or eight dark gray bars; face whitish to rich buff, bordered by black; ear-tufts black margined with whitish or buffy; underparts whitish, washed irregularly with buffy—the breast broadly and irregularly streaked and the sides and belly *barred* with dark brown and gray; feet buffy; eyes bright yellow.

Length: 15 inches.

RANGE IN PENNSYLVANIA.—A fairly common, though somewhat local



Long-eared and Short-eared Owls

resident, which may migrate to an extent when food is scarce during winter. It is usually to be found near hemlocks.

NEST.—A flat platform of twigs, sometimes built upon the old nest of a squirrel or Crow, lined with finer materials and a few belly feathers from the owls. Sometimes an old Crow nest is used without any renovation or addition. *Eggs:* 4 to 6, white.

Long-eared Owls are neither noisy nor bold, and may therefore live in a region without being known unless the bird student assiduously searches for them in dense hemlock clumps, in cedars, or thick grape-vine tangles, where they are usually to be found. They are principally nocturnal, and it is sometimes difficult to make the birds fly from their perches during the day. Any medium-sized owl which flies from a dense hemlock is likely to be of this species. Its general appearance, at such a time, is grayish.

It is a highly beneficial bird, living almost altogether on mice which it captures both in the woodlands and at the edges of fields. These it swallows wherever it may be, but the pellets are usually cast up during the daytime at the favorite resting-place, so after a few months' sojourn at one point the pellets become numerous. Pellets of this nature, strewn over the ground, are always a fairly sure sign of the presence of owls.

The young, which resemble their parents in color, are remarkably adept at clambering about their nesting-tree before they can fly. They are odd in appearance when newly hatched, with their queer

eyes and large mouths. Since the eggs are laid and hatch at intervals of two or three days each, the young are of different sizes.

The call-note of this Owl, which I have not frequently heard, resembles a Screech Owl's quavering whistle somewhat, but is shorter, more whining, and less musical, and is varied with angry, coughing sounds. This species is protected in Pennsylvania.

SHORT-EARED OWL

Asio flammeus (Pontoppidan)

OTHER NAMES.—Meadow Owl; Marsh Owl; Swamp Owl; Bog Owl.

DESCRIPTION.—Size medium, like the Long-eared Owl; head with very small tufts, *not apparent in field*. Dark brown above, the feathers margined with buffy brown, the wings spotted and barred with buffy, the tail with rich buffy and brown bands of about equal width; underparts buffy or whitish, streaked, broadly on breast, narrowly on belly, with dark brown; feet buffy; eyes yellow. Length: 15 inches.

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant from March 1 to April 15 and sometimes later and from October 1 to November 15. It has been known to nest once or twice within the Commonwealth; it is sometimes found in winter, particularly in the lowlands of the less mountainous counties.

The Short-eared Owl sometimes hunts during the day. It courses over the meadows and marshes, its wide, soft wings carrying it easily but rather unsteadily, a few feet from the ground. As a rule, it prefers to hunt at eventide.

It nearly always perches on the ground. Its coloration is protective as it sits among the dead grasses or cat-tail leaves, motionless until it springs awkwardly into the air and makes off. It does not often alight in trees, though it may occasionally roost in low, dense bushes or conifers.

As the Short-ear flies away, the light spots on the upper surfaces of the wing and the dark spots at the bend of the wing on the under surface are usually noticeable. Any medium-sized owl which flies up from the ground in the open is almost certain to be of this species.

Its food habits are strictly beneficial. It captures mice, preferring to hunt in the open, almost never capturing its prey in the woodlands. It is often found in large flocks during the period of migration. In fact, where one occurs others are likely to be found. Flocks sometimes number a hundred or more individuals. When these owls visit a farm in such numbers for a week or two, they may effectively destroy the mice and other destructive small mammals.

The Short-eared Owl is curious; squeaking cries, given in imitation of a mouse or small bird, will sometimes cause it to come very close, where it may hover for several seconds, if the observer remains perfectly motionless. The Short-eared Owl is protected in Pennsylvania.

BARRED OWL

Strix varia varia Barton

OTHER NAMES.—Hoot Owl; Black-eyed Owl (rare).

DESCRIPTION.—Much larger than a Crow; no tufts on the head; feet feathered almost to claws. Upperparts dull chocolate-brown, each feather with two or three grayish

white or buffy bars, especially noticeable on scapulars; tail and wings distinctly barred; face grayish, finely barred with dark gray; underparts whitish or grayish white, tinged with buff, the breast distinctly *barred*, the belly and sides streaked with dark brown; bill greenish yellow; eyes very large, dark brown with blue-black pupils. *Length:* 20 inches.

RANGE IN PENNSYLVANIA.—A fairly common but rather local permanent resident, found chiefly in deep woodlands and usually along streams or in lowlands, not on the ridges as is the Great Horned Owl.

NEST.—Almost always a cavity in a tree, though sometimes the deserted nest of a Crow or hawk. *Eggs:* 2 to 4, white, and quite round.

I shall never forget my first glimpse of a Barred Owl. In a deep woodland, where all was quiet and where shadows lent an air of mystery, I suddenly realized that a shapeless ball of brown on a nearby

branch was *three* young Barred Owls, sitting very close together, eyes nearly shut. As I approached they refused to budge, preferring, it appeared, to keep their eyes closed so as not to be bothered with any unpleasant consideration of an encounter with an enemy. When I rapped the branch upon which they sat, they opened their eyes, popped their beaks, and flew off grunting. Their mother swooped down upon me with an angry cry.

The Barred Owl's song is weird. It is a series of eight or nine hoots which are given with much vigor, and which, at a distance, sound like the barking of a dog. When two or three Barred Owls join in a chorus, the effect is unbelievably comical. The usual cry is often varied with single hoots, barks, or grunts.

It is not blameless in food habits. The usual fare of mice and chipmunks is occasionally varied with squirrels, rabbits, and birds, usually of smaller varieties.

A good imitation of the cries of a Barred Owl may draw the creatures close, sometimes many of them at once. This cry will sometimes attract Crows also, who sense the possibility of a good hour's attack upon an ancient foe.

The Barred Owl is not protected in Pennsylvania.



Barred Owl

SAW-WHET OWL

Cryptoglaux acadica acadica (Gmelin)

DESCRIPTION.—Considerably smaller than a Screech Owl; no tufts on head. *Adults*: Facial disc white, with radial streaks of brown; upperparts dull chocolate-brown, finely streaked on head and spotted on back and wings with white; tail with three or four whitish bars; underparts white, broadly streaked with dark reddish brown; legs and feet white, feathered down to claws; eyes yellow. *Immature*: Like adult, but head and back unspotted, and breast brown, unstreaked; belly deep buffy; eyes brownish. *Length*: 8 inches.

RANGE IN PENNSYLVANIA.—Nests rarely in the northern and mountainous counties. Chiefly to be found as an irregular visitor in winter, in northern and central Pennsylvania.

NEST.—In a cavity, frequently a wood-pecker's deserted nest. *Eggs*: 3 to 5, white.

This tiny owl is rarely seen, even though it lives in the vicinity. It hunts its food at night and sleeps so soundly by day that it may be captured in the hand. Its food habits are strictly beneficial and it is protected by law.

Look for the Saw-whet Owl in dense growths of alder, hemlock, or in vines. A very small owl of erratic, rapid flight is likely to be of this species. All records of it are very desirable.



Screech Owl, Red Phase
Saw-whet Owl

SCREECH OWL

Otus asio nævius (Gmelin)

OTHER NAMES.—Squinch Owl; Little Owl; Red Owl; Gray Owl; Hoot Owl; Squeak Owl; Mottled Owl.

DESCRIPTION.—Size small, but little longer than a Robin, though heavier; head with prominent ear-tufts, almost always visible in the field; feet feathered down to claws. *Red phase of plumage*: Upperparts bright reddish brown, finely streaked with black, the scapulars streaked with buffy white; underparts white, streaked finely with black, and barred with reddish brown, chiefly on sides. *Gray phase of plumage*: Upperparts gray, mixed with brownish, streaked with blackish and mottled with white and buffy, especially on scapulars; underparts white, streaked and barred with black, grayish, and white, some of the patterns of the feathers being beautiful and unusual; eyes yellow. *Length*: 9½ inches.

RANGE IN PENNSYLVANIA.—A common permanent resident throughout the Commonwealth.

NEST.—In a cavity in a tree, often in an orchard. *Eggs*: 4 to 6, white.

The Screech Owl is usually a familiar village bird whose quavering song is thought by some to be sad and ominous, by others to be

among the most beautiful songs given by our birds. It lives principally upon mice but it also captures small birds, particularly in the spring when it feeds upon nestlings which it finds in the vicinity. The coloration of the Screech Owl is interesting. That there should be two distinct types of color pattern, wholly independent of age, sex, or season, seems rather useless. Some purpose at present unknown may be served by this phenomenon. The Screech Owl is protected in Pennsylvania.

GREAT HORNED OWL

Bubo virginianus virginianus (Gmelin)

OTHER NAMES.—Hoot Owl; Big Owl; Cat Owl.

DESCRIPTION.—Size large; head with prominent tufts of feathers; feet fully feathered down to claws; female noticeably larger than male. Facial disc rich orange-brown; ear-tufts black, edged with rich buffy; upperparts mottled and speckled with gray, black, white, and buffy; throat pure white; underparts buffy and white, finely and thickly barred with black; feet buffy; tail and wings inconspicuously barred; eyes large, bright yellow. Length: About 2 feet.

RANGE IN PENNSYLVANIA.—A fairly common permanent resident throughout, particularly in higher woodlands along the ridges.

NEST.—An old Crow's or hawk's nest, somewhat relined, or a large cavity in a tree or cliff. Eggs: 2 or 3, white, and nearly round.

The eggs of this great bird of prey are laid early. More than once I have seen the mother incubating eggs, her back covered with snow. In Pennsylvania, nesting usually begins in mid-February, though a set of eggs has been taken in late January.

The Great Horned Owl is so muscular and so well armed with heavy beak and iron talons that it does not

hesitate to capture large prey, such as large chickens, geese, and even turkeys. It is very fond of cotton-tail rabbits, whose skulls it crushes with a nip of its beak, and often kills skunks, though it may carry a reminder of the encounter for months. It is one of our most destructive birds of prey, though it varies its diet with mice and other harmful creatures.

The deep-voiced hoot of this owl is usually heard on early spring nights. A mellow, bass *who, who-who-who, who, who*, with remarkable carrying power, is the love-song. It is sometimes given all night



Great Horned Owl

long during late January, when the moonlight gives the woodlands a chilly and mysterious brilliance. A loud and startling scream is sometimes given, which is often wrongly attributed to a wild cat. The probability is that a wild cat in its wildest fit of anger or alarm could not produce a sound half so loud and terrifying.

In captivity the Great Horned Owl rarely becomes tame, though it may stand on its perch quietly enough during the day. One which I had at one time was somewhat tractable, yet not to be trusted. It caught the fingers of my left hand one day with its great claws. Being unable to extricate myself, and being threatened at any minute with a nip from the vicious beak, I summoned aid. I learned a little that day about the terrific grip that closes upon the unfortunate rabbit or skunk this creature captures.

SNOWY OWL

Nyctea nyctea (Linnæus)

OTHER NAMES.—White Owl; Arctic Owl; Snow Owl.

DESCRIPTION.—Size large, head without ear-tufts; feet so heavily feathered that the claws are sometimes hidden. Plumage white, barred with dark grayish brown, particularly on the back and wings and sides of breast. Individuals vary greatly in appearance, some being pure white, others being heavily barred. Younger birds are usually darker. Eyes bright yellow. **Length:** About 2 feet.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitor, particularly in the northern counties, and occasionally common as during the hemal invasion which occurred in 1926-27.

The Snowy Owl is a bird of the open fields, not of the woodlands, and, like the Rough-legged Hawk, is likely to be seen perched on a fence-post, a hay-stack, or on the ground, rather than in a tree. Its white plumage makes it a prominent feature of the landscape save when there is snow on the ground.

In Pennsylvania, its food includes small game animals and birds, mice, and other small mammals, and, occasionally, poultry. It is not particularly harmful, since it usually confines its hunting to the open fields. In the North Country it preys upon water-fowl. Its flight is very strong and rapid. It is not protected in Pennsylvania, though it should be because of its great rarity.

YELLOW-BILLED CUCKOO

Coccyzus americanus americanus (Linnæus)

OTHER NAME.—Rain-Crow.

DESCRIPTION.—A long, slender bird about the size of a Robin, with very long tail and curved bill; feet with two toes pointing forward, two backward. Upperparts olive-gray, glossed with green, the primaries rich reddish brown, apparent in flight; tail with outer feathers black, broadly tipped with white,

the outer vane of outer feathers also white; underparts white; bill blackish, the lower mandible rich yellow; eyes dark brown; eyelids yellowish. *Length: 12 inches.*



Yellow-billed Cuckoo
Black-billed Cuckoo

RANGE IN PENNSYLVANIA.—A summer resident from early May to late September, found chiefly about orchards and shade trees, principally in the southern and less mountainous counties. Additional nesting records of this species are desirable.

NEST.—A loose platform of twigs placed on a horizontal branch, usually not more than 15 feet from the ground. *Eggs: 3 to 6, pale greenish blue.*

The cuckoos are slim, retiring birds, which often are not seen unless they fly from the thick leaves where they have been searching for caterpillars—their favorite food. The Yellow-billed Cuckoo's very reddish wings serve to identify it at considerable distance. Its song is an unmusical series of *kuks*. No song is given which resembles the word

“cuckoo,” our birds receiving their name merely from their relationship to the famed English bird.

BLACK-BILLED CUCKOO

Coccyzus erythrophthalmus (Wilson)

OTHER NAME.—Rain-Crow.

DESCRIPTION.—Upperparts grayish brown, faintly glossed with greenish and bronze; outer tail-feathers narrowly and *inconspicuously* tipped with white; underparts white, somewhat grayish on throat and breast; bill black; eyes dark brown; *eyelids red*. *Length: A little under 12 inches.*

RANGE IN PENNSYLVANIA.—A summer resident from early May to latter September. I have found this species common in some of the northern counties where the Yellow-billed species was rare.

NEST.—A rather well-built platform of twigs, lined with leaves and a few grasses, usually but a few feet from the ground on a horizontal branch in a rather thick clump of saplings or in alders. *Eggs: 2 to 5, glaucous green, somewhat like those of the Yellow-bill, but darker and smaller.*

The Black-billed Cuckoo is fond of lowlands which are upgrown with young saplings, or of alders along streams. It is sometimes seen in orchards. The song of the Black-bill differs from that of the Yellow-bill in that the syllables are grouped, usually in threes. The song might be written *kuk-kuk-kuk-kuk*, *cl-uck, cl-uck, cl-uck*, *kuk-kuk-kuk*, *kuk-kuk-kuk*, *kuk-kuk-kuk*, *kuk-kuk-kuk*, the last syllables dying off gently. The Yellow-bill's song is louder.

Like its slightly larger relative, the Black-bill is fond of caterpillars, and both are very valuable birds. They eat so many "woolly" caterpillars that their stomachs become lined with the spines from the bodies of their prey.

BELTED KINGFISHER

Streptoceryle alcyon alcyon (Linnæus)

DESCRIPTION.—Head large, with long bill and prominent crest; feet small and short; plumage firm and compact. *Male:* Head and crest blue-gray, the feathers with dark centers; two spots, one in front of, and one under eye, and collar about neck, white; back and band across breast blue-gray, the wings and tail considerably spotted with white; bill blackish; eyes dark brown. *Female and young:* Similar, but with sides and a broken band across lower breast bright reddish brown, noticeable in the field. *Length:* 13 inches.

RANGE IN PENNSYLVANIA.—A common and widely distributed summer resident from late March until the end of October; occasional in winter, when the streams are open. It does not occur along streams which have been polluted by mining refuse and other poisonous waste products.

NEST.—At the end of a 6-foot burrow in a bank, made of a few fish-bones and scales crudely scraped together. *Eggs:* Usually 7, glossy white. The burrow, while usually dug rather high on a bank, directly along the stream, is sometimes located at some distance from water. It is dug with the bill and feet.

The flashing white collar and underparts of the Kingfisher gleam as he flies rapidly along his chosen stream, giving his loud, rattling call. As he perches on a favorite overhanging stub, he elevates his crest, rattles once or twice, then becomes quiet as he watches the pool below him. Suddenly he dives from his perch, there is a splash, and he disappears beneath the surface. In a few seconds he arises, a slim, glistening fish in his mandibles. He makes off up stream, rattling again and again as the fish ceases its struggles, then swallows his prey, head first, entire. In addition to fish, he eats crayfish and other small aquatic creatures, and sometimes mice.

When the young hatch they are naked and ugly. They soon are covered with pin-feathers, however, and when the tips of these break, the young begin to look like their parents at once. Several days before they leave the burrow to learn angling for themselves, they scuttle about on their short feet, sometimes coming to the entrance for a moment to glimpse the world that is soon to be such



Belted Kingfisher, Male

an unfolding of adventure for them. They rattle like their parents, and if a hand is thrust in among them, they pick savagely at the fingers—either in anger or with the belief that a larger, finer fish than parents ever caught has come to be swallowed.

Kingfishers capture some trout and other valuable food or game-fish and are therefore not protected in Pennsylvania.

HAIRY WOODPECKER

Dryobates villosus villosus (Linnæus)

OTHER NAME.—Sapsucker (erroneous).

DESCRIPTION.—Smaller than Robin; like other Woodpeckers, usually seen perched on the trunk of a tree or flying, in a strongly undulating fashion, through the air. *Adult male*: Top of head, line through eye and line from lower mandible to rear part of head, black, *nape bright red*, rest of head, white; back, black with white median stripe; wings black, spotted profusely with white; tail black, the outer feathers *white, unspotted*; underparts white. The adult female is precisely the same but lacks the red nape. Young birds have the *crown red*, the tips of the feathers lightly speckled with white. Length: 9½ inches.

RANGE IN PENNSYLVANIA.—A common permanent resident, usually to be found in the higher woodlands but often also in the towns.

NEST.—A cavity in a tree trunk, usually from 25 to 60 feet from the ground, the entrance about 2 inches in diameter. EGGS: 3 to 5, glossy white.

Hairy Woodpecker



The Hairy Woodpecker's loud, sharp *peek, peek* is a welcome sound in winter woods of northern Pennsylvania where so few birds are found during the cold season. This species is the enemy of all wood-boring larvæ, its sharp, chisel-like bill, long, barb-tipped tongue, strong feet, and stiff tail all being peculiarly adapted to existence on the tree-trunks. It is sometimes found in orchards, but about towns and human dwellings is not nearly so often seen as its smaller, more confiding relative, the Downy Woodpecker.

DOWNY WOODPECKER

Dryobates pubescens medianus (Swainson)

OTHER NAME.—Sapsucker (erroneous).

DESCRIPTION.—About the size of an English Sparrow. Precisely like the Hairy Woodpecker, but noticeably smaller, with shorter, weaker bill, and the outer tail-feathers distinctly barred with black. The Downy is a quieter, less energetic bird than its larger cousin; its call-note is softer in quality and its song, which is composed of a series of call-notes rapidly repeated, is more musical than that of the Hairy Woodpecker. Length: A little under 7 inches.

RANGE IN PENNSYLVANIA.—An abundant permanent resident, often seen in the towns.

NEST.—A cavity in a dead stub, usually from 15 to 30 feet from the ground, the entrance about $1\frac{1}{2}$ inches in diameter. *Eggs:* 4 to 6, laid on a heap of small chips at the bottom of the cavity, glossy white.

The careful bird student can distinguish the Hairy and Downy Woodpeckers from call-notes, general appearance, flight, or even from the sound of their pounding on wood, which in the Hairy is so loud and positive in nature as to suggest, at times, a much larger bird. The amateur, however, may have some difficulty in distinguishing the two species.

The Downy and Hairy both like to be fed suet during the winter. They will come regularly to the feeding-counter and often become quite tame.

YELLOW-BELLIED SAPSUCKER

Sphyrapicus varius varius (Linnæus)

OTHER NAMES.—Yellow-bellied Woodpecker; Sapsucker.

DESCRIPTION.—Smaller than a Robin, with all the characteristics of the woodpecker tribe to which it belongs. *Adult male:* Top of head and throat rich, deep red; lines below crown-patch, back of eye, and enclosing throat to form prominent breast-patch, black; lines above and below eye white; back black, spotted with white; wings black, with prominent white patch on greater coverts, and primaries spotted; tail black, the central and outer feathers marked with white; underparts whitish and pale yellow, barred on sides and flanks with blackish gray. *Adult female:* Similar, but throat white. Immature birds are similar to the adult female, save on the head and back, which are brownish throughout, spotted irregularly with black and on top of head with flecks of red, yellow, and glossy black. *Length:* $8\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A common migrant, sometimes abundant, from March 30 to May 15 and from September 1 to November 15; rare and local as a summer resident in the northern and mountainous counties; casual in winter.

NEST.—A cavity in dead or living wood, often in a yellow birch, from 30 to 60 feet from the ground. *Eggs:* 3 to 6, glossy white.

The Sapsucker is, for the most part, a quiet and rather dignified woodpecker. Rarely does it pound noisily at a dead stub, searching for grubs. As a rule, it is to be seen drilling its sap-wells on the lower trunk of a maple, apple, or hemlock, where it clings sometimes for hours at a time if unmolested. These wells, which penetrate only to the sap-bearing layer of bark, are made in regular rows. Here gathers the sap which the bird regularly swallows, together



Yellow-bellied Sapsucker

with all the small insects which have come to drink. This sap-drilling is a destructive trait, for many valuable trees are girdled annually through the attacks, chiefly, of the migrant birds. During the summer the parents capture only insect food for their young.

The mewing note of the Sapsucker will startle the beginner in bird-study. It is almost as convincing an imitation of the cry of a cat as is the scolding, querulous call of a Catbird, and is a familiar sound of the spring woods.

When courtship starts, Sapsuckers quite forget their dignity and go flashing through the tree-tops, sometimes three or four in a flock, bowing and dancing, displaying their spotted wings and tails and giving forth loud and incessant Flicker-like cries of *plee-kah, plee-kah.*

A Sapsucker sometimes actually becomes intoxicated with the juice it has drunk and wanders through the woods bumping into trees and branches, grasping the bark as best it can with toes which are marvelously adapted to holding to rough surfaces, even while the bird sleeps.

PILEATED WOODPECKER

Phœnotomus pileatus abieticola (Bangs)

OTHER NAMES.—Red-headed Woodpecker (erroneous); Cock o' the Woods; Log-cock; Woodcock (erroneous); Indian Hen; Black Woodpecker.

DESCRIPTION.—Size large, about that of a Crow; both sexes with prominent triangular crests. *Adult male:* High crest and line from lower mandible

to middle of head, bright glossy red; narrow line back of eye and prominent line from bill under eye to neck and down to edge of breast, white; throat whitish; patch at base of folded primaries and irregular barring on sides and flanks, white; *the under-wing lining and most of the inner web of primaries white*, showing plainly in flight. Rest of plumage brownish black; eyes bright orange-yellow. *Female:* Similar, but front of head brownish, only the rear part of the crest red. Immature birds are similar to the female. Length: 17 inches.

RANGE IN PENNSYLVANIA.—A rare permanent resident, found chiefly in the northern mountainous counties, but a few still persist in the southwestern counties and locally elsewhere. It is becoming somewhat commoner as a result of rigid protection.

NEST.—A large cavity in a tree, drilled by the birds, usually in a dead stub, though sometimes in a living yellow birch, at from 20 to 60 feet from the ground. EGGS: 3 to 5, glossy white.

The magnificent Log-cock is all too rare in Pennsylvania, but wherever the striking



Pileated Woodpecker

creature swings noisily across a valley or pounds with its great bill into soft wood, the bird student receives a thrill few of our birds can afford. Its flight is rather slow and laborious, and noticeably less undulating than in other woodpeckers.

It is given to searching for food in deep, shadowy woods, where it is sometimes the only bird to be found, and where the sound of its hammering gives the only hint of life in the vast stillness.

The call of the Pileated is a high, irregular cackle, something like the spring song of the Flicker, but more noisy and irregular. An imitation of this cry, a clapping of the hands, or the beating of a dead stub with a stick, will sometimes bring the curious, bright-eyed creatures very close—too close, if the gunner be of the law-breaking kind. The fact that this bird is sometimes called Woodcock, and therefore regarded as a game-bird, has led to the destruction of many of them. They are naturally creatures of the wilderness, and have never been really common. Careful protection will be necessary if we are to keep them from extinction in this Commonwealth.

The food of the Pileated Woodpecker is chiefly grubs, bored sometimes from the very center of great trees. Its long, barb-tipped tongue aids it in securing its food.

In looking for the bird, seek the wild, wooded mountains. Listen for the cackling cry; watch for a big, black bird with flashing wing-linings; and attempt an imitation of its hammering by beating two sticks together.

RED-HEADED WOODPECKER

Melanerpes erythrocephalus erythrocephalus (Linnæus)

OTHER NAME.—Red-head.

DESCRIPTION.—A little smaller than a Robin. *Adults:* Head, neck, and upper breast, rich, deep red; upperparts glossy blue-black; the terminal half of the secondaries, rump, and upper tail-coverts, white; tail black, the outer feathers tipped and somewhat edged with white; lower breast and belly white, a reddish or buffy cast in the middle. *Immature birds:* Head and neck grayish brown, somewhat mottled; upper back glossy black, barred with gray; wings black, the terminal half of secondaries *barred with black and white*; tail usually as in adults; underparts white; the sides more or less streaked and spotted with dark brown or gray. *Length:* 9½ inches.

RANGE IN PENNSYLVANIA.—A local but usually common summer resident from April 15 to October 1; casual in winter.

NEST.—A cavity drilled in a dead tree or telegraph-pole, usually from 15 to 30 feet from the ground, often in an oak. *Eggs:* 3 to 5, glossy white.



Red-headed Woodpecker

The white wing-patches of this bird are conspicuous, particularly in flight, and its loud cry, *kree-er, kree-er*, is a familiar roadside sound. It is given to capturing insects flycatcher-fashion and is an accomplished acrobat in the air. The food of the Red-head is varied, and while it often eats grubs, it also takes other insects and much small fruit. Occasionally an individual develops the habit of eating the eggs of other birds.

RED-BELLIED WOODPECKER

Centurus carolinus (Linnæus)

OTHER NAMES.—Ladder-back; Zebra Woodpecker; Chiv; Sapsucker (erroneous).

DESCRIPTION.—A little smaller than a Robin. *Adult male*: Top of head and back of neck bright, glossy scarlet; rest of head, neck, and underparts, ashy gray, the region about the bill and the belly usually tinged with red; upperparts, including wings, strikingly barred with glossy black and white; upper tail-coverts white, with median streaks or sagittate markings of black; tail black, the feathers considerably marked with white. *Adult female*: Similar, the forepart of the head gray. Immature birds are similar to the female, but the belly is often tinged with brownish rather than red. Length: 9½ inches.

RANGE IN PENNSYLVANIA.—Fairly common in the extreme southwestern counties; local, sometimes common, in other western counties as far north as Crawford County, and through the southern tier of counties; a permanent resident wherever found.

NEST.—A cavity drilled from 20 to 60 feet from the ground, usually in a forest tree. *Eggs*: 3 to 6, glossy white.

The squirrel-like cry of this woodpecker, which may be written *chiv, chiv*, is a familiar sound in some of the woodlands of Greene County. Its call-notes resemble those of the Red-head and Flicker, and are considerably varied. The principal range of this species is the southern United States. It is gradually moving northward, however, like the Cardinal, and should be looked for in all central counties. The bright red top of the head and prominently barred back are good field-marks.

NORTHERN FLICKER

Colaptes auratus luteus Bangs

OTHER NAMES.—Golden-winged Woodpecker; Yellow Hammer; Wake Robin; Ground Woodpecker; Wickup; Clape; Yarrup; High-hole; Plickah; Ant-bird, and many other names, most of them colloquial.

DESCRIPTION.—A little larger than a Robin. *Male*: Top of head gray, scarlet patch on nape, black patch extending backward from each lower mandible, rest of head cinnamon-brown; back and wings olive-brown, barred with black, the wing-linings and shafts of feathers bright yellow, noticeable in flight; rump and upper tail-coverts white; tail-feathers black above, edged with whitish, bright yellow below; breast with prominent black patch; underparts light cinnamon-brown, each feather with round black spot at

tip; under tail-coverts barred with black. *Female*: Similar but lacking the black marks which extend backward from the lower mandibles. *Immature birds*: Similar to the female, but with red sprinkled over top of head. *Length*: 12 inches.

RANGE IN PENNSYLVANIA.—An abundant and widely distributed summer resident and migrant from March 15 to November 15; casual in winter.

NEST.—A cavity drilled in a living or dead tree, often an apple or maple, from 4 to 40 feet from the ground. *Eggs*: 5 to 11, usually 7 or 8, glossy white.

The Flicker is one of our best-known birds. Living in the towns, and conspicuous as it is with its golden wing and tail-linings, its white rump-patch, and easily imitated cries, it is familiar to all, and has won for itself many a nickname.

It is often seen hopping about on the lawn. Its ability in perching or in standing on the ground marks it as a creature of wide adaptation, yet on the tree-trunk it is a normal woodpecker, using its stiff tail-feathers as a prop.

The Flicker is very fond of ants. Patiently it will sit on an ant-hill, probing its long, saliva-covered tongue down into the burrow, drawing the insects out and eating them by the dozen. It may remain thus at an ant-hill half an hour at a time, filling its gizzard and crop with the insects, whose bites and acid flavor seem not to be objectionable.

Flickers sometimes become annoying when they choose a tin roof or favorite spot on a gable as a drumming-point. At such a place they will roll out their challenge at sunrise on the spring mornings, wakening all the household. Occasionally they drill their nests in houses, under the eaves, and thereby may do considerable damage.

The courtship dance is animated and beautiful. With handsome wings flashing and tail widely spread, the birds bow to each other, calling rapidly *wickah, wickah, wickah*. Flickers are considerably persecuted by Starlings which oust them from their nests and use the cavities as their own.

WHIP-POOR-WILL

Setochalcis vocifera vocifera (Wilson)

DESCRIPTION.—Head and eyes large; bill very small; mouth lined with long, hair-like feathers which protrude in front of bill; feet small and weak; plumage soft and lax; color pattern highly protective. Head and upperparts



Northern Flicker
Red-bellied Woodpecker

rich deep brown and gray, streaked, mottled, and barred with black, buffy, and whitish; a noticeable white band across throat; tail with terminal half of three outer feathers white; *no white spot in wings*; underparts buffy, irregularly and finely barred and marked with blackish; eyes deep brown. The

female differs only in having the throat-patch and tips of the outer tail-feathers buffy instead of white. *Length: 10 inches.*

RANGE IN PENNSYLVANIA.—A somewhat local summer resident from April 20 to September 30; found only in deep woodlands.

NEST.—None. **Eggs:** 2, white, spotted sparingly with grayish, lilac, and brownish, and laid on the leaves or ground, without even a depression.

The Whip-poor-will is never seen flying high in the sky, and the absence of white spots in the wings always distinguishes it from the Nighthawk. To find the Whip-poor-will one must go to the deep woods where, in a quiet tangle of ferns and bushes, a dark brown, silent-winged creature may fly from the leaves, to flutter a few rods farther on, and drop again to the ground. The well-known song which is given with such constancy and fervor on spring and summer nights may be written *chuck, whip-poor-wee-ah, chuck, whip-poor-wee-ah*. Sometimes the song is repeated two hundred times or more without cessation.

NIGHTHAWK

Chordeiles minor minor (J. R. Forster)

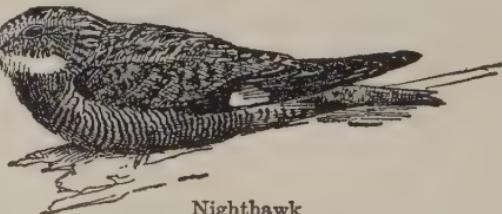
OTHER NAMES.—Bull-Bat; Whip-poor-will (erroneous); Goatsucker; Night Jar; Mosquito Hawk.

DESCRIPTION.—Mouth without prominent bristles protruding in front of short bill; wings long and pointed; tail forked. **Male:** Upperparts black, barred and variously marked with whitish, gray, buffy, and cream-color, the flight-feathers blackish, the middle of the primaries marked with a prominent bar of white which is especially noticeable from below, in flight; tail with a white bar across all but the middle feathers; throat marked with a prominent white patch; chin and upper throat black, the feathers tipped with buffy; underparts whitish, regularly and heavily barred with blackish. **Female:** Similar, but lacks the white on tail, the throat-patch is buffy, and the underparts are buffy barred with blackish. *Length: 10 inches.*

RANGE IN PENNSYLVANIA.—A common migrant, but very local summer resident from the first week of May to mid-September; during the fall migration it is likely to occur in large flocks.



Whip-poor-will



Nighthawk

NEST—None. **Eggs**: 2, white, heavily spotted with gray, placed on the ground, *in the open*, not, as a rule, in woods.

The Nighthawk is a familiar bird of summer evenings, when even over the cities it circles back and forth, calling as it hunts its insect food, *pee-ah, pee-ah*, in a rough, grating voice. In spring it courts its mate by plunging rapidly downward on set wings, producing with the vibrating primaries a booming sound which has given the bird the nickname "Bull-Bat." It is one of our most beneficial birds. During the day it sleeps or rests on the ground, or sits lengthwise on a horizontal branch. It has recently taken to laying its eggs on gravel-roofed buildings in the city. Young Nighthawks, equipped as they are with strong feet, can run nimbly. The parents, though able to fly well, have lost much of the power of their foot-muscles and can scarcely walk.

CHIMNEY SWIFT

Chætura pelagica (Linnæus)

OTHER NAME.—Chimney Swallow (erroneous).

DESCRIPTION.—Wings very long; bill and feet very small; tail of stiff feathers, all with noticeable spines at tip; sexes alike. Plumage brownish black, grayer on the throat, a deep black spot in front of eye; a ridge of feathers over the eye, forming a sort of brow.

Length: 5½ inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from about the middle of April to October. It is widely distributed and occurs in all towns.

NEST.—A shallow, basket-like structure of small twigs glued together with saliva from the bird's mouth and fastened to the bricks on the inside of a chimney, or rarely on boards on the inside of a barn, or in a hollow tree. The nest has no lining. Nests built in a chimney are usually placed well down from the top. **Eggs**: 4 to 6, white.



The familiar Chimney Swift, with its cheerful chittering cries and its rapid "bow and arrow" flight, is a common bird in all Pennsylvania towns. In the wilder sections—in the mountains, for instance—it is rare. It has come to depend upon chimneys almost exclusively as nesting-sites. This is a valuable bird, eating only flying insects, which it captures from the air.

It alights nowhere save inside the chimney, where it clings to the rough bricks with its exceedingly strong and sharply clawed feet, using its spiny tail as a prop. In securing nesting material it breaks dead twigs off with its feet while flying, lifting these to its mouth while in the air, there to cover them with saliva.

RUBY-THROATED HUMMINGBIRD

Archilochus colubris (Linnæus)

OTHER NAMES.—Hummer; Ruby-throat.

DESCRIPTION.—Our smallest bird; bill about twice as long as head; feet small, with downy plumage at base; wings with comparatively short bones, but with powerful muscles; tail-feathers pointed in male, rounded in female.



Hummingbird

Adult male: Upperparts glossy, bright green; wings and tail with steel-blue or violet reflections; throat gorgeous orange-red in proper lights, velvety black from some angles; breast with noticeable white patch; rest of underparts grayish, glossed with green on sides; tail forked. *Female:* Similar, but with almost pure white underparts and no ruby throat-patch; tail somewhat rounded, with three outer tail-feathers tipped with white. *Immature:* Similar to female, the male having its throat streaked with dusky and sprinkled with occasional ruby feathers. *Length:* $3\frac{3}{4}$ inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from May 1 to October 1 and sometimes later.

NEST.—A small, dainty structure made of plant-down, lichens, and cobwebs, saddled to a horizontal, and often dead, branch, from 10 to 60 feet from the ground, in an orchard, yard, or woodland. *Eggs:* 2, plain white.

The rapid, buzzing flight of these birds as they wander about the cannas, honeysuckles, or nasturtiums, fanning the leaves and petals with their shining wings as they search for nectar and tiny insects, is known to all who have a flower-garden. The Hummingbird should not be confused with the hawk-moth or sphinx-moth which come out at about the same time in the evening and which have much the appearance of tiny birds as they buzz among the flowers.

KINGBIRD

Tyrannus tyrannus tyrannus (Linnæus)

OTHER NAMES.—Bee Bird; Bee Martin; Tyrant Flycatcher.

DESCRIPTION.—Smaller than a Robin, with upright attitude in perching; sexes alike. Upperparts dark gray, darkest on head, wings, and tail; crown with concealed patch of orange-red; wing-coverts edged with lighter gray; tip of tail white; underparts pure white, washed with grayish on throat and breast; eyes dark brown. Young birds are similar, but lack the crown-patch, are duller in appearance, and the plumage is often more or less tinged with buff. *Length:* $8\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A migrant and summer resident, common in the agricultural districts, rather rare in forested districts, from mid-April to mid-September.

NEST.—Well constructed, of dead weed-stalks, string, and plant-fibers, lined with softer materials, placed from 4 to 30 feet from the ground, in alders, orchard, or other trees, usually in a crotch of several branches, and well toward the end of the branch. *Eggs:* 4, sometimes 3 or 5, white, spotted with dark brown.

The Kingbird is often to be seen on a barbed-wire fence, telegraph-wire, or prominent dead stub where he watches for pass-

ing insects or for hawks or Crows, which he chases with energy and effect. As he flies, his wings beat rapidly with a fluttering motion, and the white tip of his widely spread tail shows plainly at considerable distance. His challenge note, which may be written *pi-tink, pi-tink*, irregularly repeated, is the only outcry usually heard, though he occasionally indulges in a softer effort which may be called a song. If a small pebble is tossed at him in play, he watches it carefully in a curiously puzzled fashion, as though he were at the point of capturing and swallowing it. He has some difficulty in tiring and capturing insects as large as a dragon-fly, but he is very fond of these strong-winged insects, and pursues them assiduously. Rarely he captures bees, and these are usually drones.

He is at his best when he chases a hawk, owl, or Crow. At such times his anger mounts and he gives battle with all the fury of his small body thrown into the noisy and vicious attack. So determined a combatant is he that he sometimes actually alights on his larger, more awkward enemy, picking at the plumage, and perhaps at the skull and eyes.

CRESTED FLYCATCHER *Myiarchus crinitus boreus* Bangs

DESCRIPTION.—A little smaller than a Robin, with upright perching attitude and dignified, masterful bearing; sexes similar. Upperparts grayish olive-brown, outer primaries edged with dull reddish brown, and *inner-vane of all tail-feathers pale reddish brown*, which often shows plainly in flight; throat and breast light gray; belly pale yellow. *Length: 9 inches.*

RANGE IN PENNSYLVANIA.—A fairly common migrant and summer resident in the orchards and woodlands, from mid-April to mid-September.

NEST.—Of vegetable fiber, roots, downy material, and a cast-off snake-skin or two, in a cavity in a tree or a nesting-box, at from 10 to 40 feet from the ground. *Eggs: 3 to 6, creamy white, heavily streaked, longitudinally, with rich brown.*

The Crested Flycatcher's loud, incisive *creep, creep* rings through



Kingbird



Crested Flycatcher

Olive-sided Flycatcher

the spring woodlands as the handsome bird seeks mate and nesting-place. His large, crested head and yellow underparts are usually obvious in the field. He is given to perching on high dead branches, usually beneath the canopy of outer leaves, and he turns his head from side to side thoughtfully as he watches for passing insects which he captures with great agility.

This is our only bird which regularly uses cast-off snake-skins in its nest. These may serve to frighten off intruders.

PHŒBE

Sayornis phœbe (Latham)

OTHER NAMES.—Bridge Bird; Phœbe-bird; Pewee (erroneous).

DESCRIPTION.—Larger than English Sparrow, with upright position and comparatively long tail which is occasionally quickly lifted as the bird watches for insects. Upperparts grayish olive-brown, darkest on top of head; bar on wings noticeable in field; tail with outer edge of outer tail-feathers white, not noticeable in field; underparts white, suffused with yellowish, and tinged with brownish gray on breast and sides; bill and eyes black. Length: 7 inches.

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident from mid-March to November.

NEST.—Of moss and vegetable substances, lined with finer, softer materials, placed on any projection which will hold it, under a bridge, on a stone ledge, in a well or spring-house, or under the roof of a porch. Eggs 3 to 6, white, rarely with a few small brown spots.

The simple call-notes, *fit-i-bee* and *zee-bee*, and the habit of wagging or jerking the tail now and then, serve to identify this bird, even though no colors be noted. Look for it along small streams or near rock-ledges, where the

nests are built in April. The Phœbe is a confirmed eater of insects and is one of our most valuable birds. It comes with the pussy-willows and the first cries of the tiny tree-frogs, and stays until the host of migrating warblers has all but passed through.

OLIVE-SIDED FLYCATCHER

Nuttallornis borealis borealis (Swainson)

DESCRIPTION.—Smaller than a Robin, with upright carriage and dull, unmarked appearance. Upperparts, sides of breast, and sides dark olive-gray; wings and tail darker; throat and middle of breast and belly very pale



Wood Pewee
Phœbe

yellow, or yellowish white; under tail-coverts marked with dusky; a loose tuft of fluffy, silver-white feathers on either flank, sometimes *protruding through wings, on back*; bill dark, save base of lower mandible which is yellow. Length: $7\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A rather regular but rare migrant from mid-May to about the end of the month and from late August to the middle of September. As a summer resident, found only in coniferous woodlands at high altitudes or in the northernmost counties.

NEST.—Rather well made of twigs and mosses, placed on a branch of hemlock or other conifer at from 25 to 40 feet from the ground. Eggs: 3 or 4, creamy white, spotted, chiefly at larger end, with reddish brown.

The Olive-side will usually be seen on the *topmost twig* of a tree, sitting quietly in a dignified, upright manner. His call-note, *pit, per-wheer*, is very distinctive—not to be confused with any other bird-song of this latitude. The white tufts of feathers on the flanks I have found not to be a good field-mark, for they do not, apparently, often show; but the call-note and the dark sides are unmistakable. At Pymatuning Swamp I have seen fair-sized flocks of Olive-sided Flycatchers late in spring. The bird is usually so rare that the sight of several of them sitting about on the tips of the hemlocks is long to be remembered. Additional records of this species are desirable. (See illustration page 87.)

WOOD PEWEE

Myiochanes virens (Linnæus)

DESCRIPTION.—About the size of an English Sparrow, with *upright perching attitude*. Adults: Dark grayish olive above, the wings with two rather indistinct whitish wing-bars; underparts white or pale yellowish, washed with grayish on sides of throat and on breast; upper mandible dark; lower mandible yellowish; eyes black. Immature birds: Similar, but the wing-coverts tipped with buffy and underparts more yellowish. Length: $6\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from May 1 to October 1.

NEST.—A shallow cup made of vegetable fibers, small twigs, cocoons, lichens, and moss, saddled on a horizontal branch from 25 to 40 feet from the ground, usually in a shady woodland. Eggs: 3 or 4, creamy white, with a wreath of dark brown spots about larger end.

The Wood Pewee's plaintive, musical *pee-a-wee, pee-wee*, the first half ending with an upward inflection, the latter with a distinct falling, is a characteristic bird-note of the summer woodlands. The singer is usually seen high in a tree, not near the ground, as is the Phœbe. It does not have the habit of flicking its tail. A bird of the shadowy woodland, not of the open stream-sides, it will not be confused with any other bird if its song may be heard. In appearance it is much like the other small flycatchers. The song is often almost perfectly imitated by the Starling, so that Pewee songs heard in winter or in unlikely places should be investigated.

THE SMALL FLYCATCHERS

The bird student will find the shy, dull-colored, small flycatchers difficult to identify. All forms of the group found regularly

in Pennsylvania, aside from the Phœbe and Pewee, are dull olive-green or grayish above, lighter or whitish below, have a more or less noticeable eye-ring and two noticeable wing-bars. These small flycatchers are so similar in size and color that it is at times almost impossible to distinguish specimens in the hand. But they are reasonably easy to identify in the field, *chiefly from their call-notes* which are very distinctive, from their habitat which differs considerably, and from the dates upon which they are seen. They are all under 6 inches in length. All of these birds have an erect perching attitude; none of them, strictly speaking, sings a song; all are equipped with broad, flat bills, for capturing insects.



Yellow-bellied Flycatcher
Least Flycatcher Alder Flycatcher

YELLOW-BELLIED FLYCATCHER

Empidonax flaviventris (W. M. and S. F. Baird)

The Yellow-bellied Flycatcher is a migrant in mid-spring and early autumn, *not found during summer*, save at one or two high altitudes, where it nests rarely. It is always rather noticeably yellow below and is found in low, thick woodlands, not often far from the ground. The call-note is a nervous *tsek*, or *chuh-bec*, its song a querulous *tsu-eek*, with a rising inflection. In fall immature birds are sometimes exceedingly abundant.

ACADIAN FLYCATCHER

Empidonax virescens (Vieillot)

This flycatcher lives in shadowy woodlands *along ravines* where long, swaying branches of beech, maple, or hemlock overhang a stream. Here, not at great height, is built the shallow, thin nest, where three eggs are laid. These are creamy white, spotted with dark brown at the larger end. The call of this bird may be written *pit-i-yuk* or *wee-zee-eep*, and is of an explosive character. *Do not look for this bird save in woodlands along streams.* It will not be found

in swamps, or in orchards. It comes in early May and stays until mid-September and occurs chiefly in the southern and less mountainous counties.

ALDER FLYCATCHER

Empidonax traillii traillii (Audubon)

The Alder Flycatcher will be seen in low growth along streams or in swamps, often actually among alders. Its sides are yellowish, but the belly is always white. The song of this species, which is usually delivered from a prominent and sometimes high perch, may be written *becky-weer*, and is different from any other flycatcher song, save, perhaps that of the Olive-sided. Its nest is a compact structure, built in the alders, 2 to 3 feet from the ground, usually in a swamp. The three or four eggs are white, sparsely spotted with brown. The Alder Flycatcher is found chiefly in the more northerly counties as a summer resident, from early May to September.

LEAST FLYCATCHER; CHEBEC

Empidonax minimus (W. M. and S. F. Baird)

The Least Flycatcher is a bird of open aspen copses or orchards. Its energetic *che-bec*, which is given with a violent toss of the head, is always characteristic and is responsible for its common name. Look for the bird during migration in May and in September. As a summer resident it occurs chiefly in the more northern counties, where it builds its deep nest in the crotch of some low tree. The eggs, 3 or 4 in number, are pure white. Feathers are often used in the nest, which is made of vegetable fiber and hair.

HORNED LARK

Otocoris alpestris alpestris (Linnæus)

This northern relative of our Prairie Horned Lark visits Pennsylvania occasionally in winter, especially in the northern counties. It is a larger, more reddish bird, and the line above the eye is distinctly yellow, sometimes quite colorful.

PRAIRIE HORNED LARK

Otocoris alpestris praticola Henshaw

OTHER NAME.—Shore Lark.

DESCRIPTION.—Larger than an English Sparrow; a bird of the ground, with straight toe-nails, the hind one very long. *Adult male*: Patch on fore-part of crown with lateral lines leading to two tiny tufts or horns on nape, patch in front of and below eye, and another on upper breast, black; fore-

head and line above eye whitish, sometimes very faintly tinged with yellow; throat pale yellow; back of head and upperparts pale grayish brown mixed with reddish brown on neck, back, and wings; middle tail-feathers brown, the other feathers blackish, the outer vanes of the outer feathers white; lower breast and belly whitish, suffused with pinkish brown on sides and flanks; bill, feet, and eyes black. *Female and immature:* Similar, but duller. Young birds in their first plumage are much spotted, with pale yellowish above, and with blackish below. *Length:* A little over 7 inches.



Prairie Horned Lark

RANGE IN PENNSYLVANIA.—Local permanent resident, sometimes quite common, and found only in the opener sections, on bald hilltops or in wide fields in agricultural districts.

Nest.—A cup in the ground lined

with grasses, plant-down, and other vegetable material. *Eggs:* 3 to 5, greenish white, heavily marked with grayish brown, sometimes with a wreath of heavier spots around larger end. The nest is always placed in a wide-open field, sometimes on a bare hilltop. It is built very early in the season, sometimes in early or mid-March, while snow is still on the ground.

In the windy, open fields or on treeless hilltops, this demure and dull-colored bird lives. As he walks or runs among the short grass, twittering in a companionable way, standing still for a moment to survey his surroundings, then wandering off again, little is noted to remind us of the glorious courtship song which this bird of the ground gives during early spring, and for which he should be as famous as the English Skylark. Mounting upward from the clods, he finally reaches a far height, where he pours out his melodious, tinkling music, minute after minute, sweeping about in wide circles, or steadily flying into the wind. Thirty or forty times he may give his song, then becoming tired of his performance, downward he drops to the earth in long, graceful sweeps to alight unconcernedly. He sometimes sings from the ground or from a fence-post.

Horned Larks are given to flocking together in the winter, and when snow covers the ground they sometimes come into the farm-yards, or congregate along roads, where they eat horse-manure or waste grain. Look for the black facial markings of these plain brown birds, and remember that they will be found *only in open country*.

BLUE JAY

Cyanocitta cristata bromia Oberholser

DESCRIPTION.—Larger than Robin; sexes similar, both with prominent crest; nostril covered with tuft of feathers. Head, crest, and back grayish blue; forehead and a noticeable collar across lower throat, ear-coverts, and back of crest, black; region about eye whitish; throat and underparts grayish

white, darkest on sides; wings and tail bright turquoise-blue, the greater coverts, secondaries, and tertials tipped broadly with white, and all of the feathers barred strikingly with black on their exposed surface; tail-feathers barred with black, the outer ones tipped noticeably with white; feet and bill black; eyes dark brown. *Length:* About 12 inches.

RANGE IN PENNSYLVANIA.—We should expect the Blue Jay to be a permanent resident in Pennsylvania wherever it is found. It occurs the year round, notably in the southwestern and southern counties, and is usually a summer resident and early spring and mid-fall migrant from March 20 to November 1; as a summer bird it is somewhat local in distribution.

NEST.—A bulky mass of twigs, rootlets, and weed-stalks, rather well made and neatly cupped, placed from 10 to 30 feet from the ground, usually in a more or less open situation and often in a conifer. *Eggs:* 3 to 6, pale gray green or greenish gray, heavily marked with dull and indefinite brown and gray spots.

The Blue Jay's colors and manners are unmistakable. As he flies, the white-tipped outer tail-feathers and secondaries show plainly; as he perches, his crest is prominent. But when the bird student essays to identify the Blue Jay from call-notes alone there may be trouble, for this bright creature not only has a considerable vocabulary of his own but also imitates other birds extremely well. He can reproduce the scream of a Red-shouldered Hawk so faithfully that small birds of the vicinity drop into silence for an instant. More than once this cry has misled me. As a rule, he screams *peer, peer* in a dominant, harsh voice, or gives violin-like, squeaky calls, the pattern and musical intent of which are known only to himself.

He is a confirmed nest-robber and is not protected by law in Pennsylvania. While it is true that he eats the eggs and young of smaller birds, yet he has some food habits in his favor, and at worst is a handsome villain.

The nest is defended valiantly by the parents. I once climbed to a Blue Jay's nest and took the last remaining young one. As I started to descend I felt a sharp blow on my forehead. When I reached the ground my face was lined with blood; the parent bird had punctured my skin with her beak.

In fall and winter, Blue Jays are very fond of beechnuts and acorns. At the feeding-counter they often choose peanuts if these are to be found. Their hearty manner and brilliant colors make them an attractive addition to any flock of bird-neighbors, in spite of their objectionable traits.



Blue Jay

NORTHERN RAVEN

Corvus corax principalis Ridgway

DESCRIPTION.—Much larger than a Crow; bill and feet very strong and heavy; feathers of throat long and *pointed*, not rounded. Entire plumage black, glossed with steel-blue and pale greenish and purplish. *Length:* About 24 inches. Wingspread about four feet.



Northern Raven

RANGE IN PENNSYLVANIA.—A rare permanent resident, found only in the wildest mountain gorges, chiefly in the central counties.

NEST.—A very large and bulky affair, deeply cupped like a Crow's, usually placed in an inaccessible niche on a cliff or high in a tree. It is made of twigs and branches and is lined with moss, hair, grape-vine bark, and rootlets. *Eggs:* 3 to 6, usually pale bluish or bluish green, spotted with brown, olive, and gray.

Ravens might easily pass for Crows, were not their cracked, rauous voices to echo solemnly through the gorges which they inhabit. Looking up we may see the great black birds *circling* through the sky like hawks; we may be near enough to note that the tail is not rounded as in the Crow, but wedge-shaped, the middle feathers being noticeably the longest. When a Raven does not soar, nor croak, he appears much like a Crow, and identification ought to be either from notes, or flight, or from direct comparison with Crows. These smaller cousins, incidentally, mob the Raven with as much gusto as they exhibit in attacking an owl.

CROW

Corvus brachyrhynchos brachyrhynchos Brehm

DESCRIPTION.—Black, glossed with bluish and purplish, underparts duller in appearance. The Crow is probably our best-known bird. *Length:* 19 inches.

RANGE IN PENNSYLVANIA.—In southeastern counties the Crow occurs the year round, and during winter in great flocks; elsewhere it is chiefly absent in winter, returning in late February or early March, and remaining until December. It is widely distributed and abundant as a summer resident.

NEST.—A bulky structure made of twigs, moss, and leaves, lined with hair, grape-vine bark, and moss, placed from 20 to 60 feet from the ground, in trees. *Eggs:* 3 to 6, generally light bluish green, heavily spotted with brown and gray.

Call-notes, flight, appearance, and bad habits of the Crow are all well known and need no discussion. It should be said, however, that

its destruction of ground-inhabiting insects, tomato and tobacco worms, and small mammals, is to its credit. The Crow is not protected in Pennsylvania.

FISH CROW

Corvus ossifragus Wilson

The Fish Crow is decidedly smaller than the common Crow (16 inches in length), though this is not noticeable in the field. The underparts are brightly glossed as above, and the call-notes are decidedly different from those of the Crow, being higher and not sounding like a *caw*. The Fish Crow occurs in Pennsylvania chiefly along the Susquehanna and Delaware rivers, and is not usually seen far from these streams. At Harrisburg a large colony nests at McCormick's Island. Fish Crows often pick their food from the surface of the water like gulls.

STARLING

Sturnus vulgaris vulgaris Linnaeus

OTHER NAMES.—Blackbird (erroneous); Black Sparrow (erroneous).

DESCRIPTION.—A little smaller than a Robin, with a long, pointed bill and short tail; feathers of head and neck narrow and pointed; *walks when on the ground*. Adults in spring: Plumage black, highly glossed with blue, green, purple, and violet, particularly on the neck, all feathers above more or less broadly tipped with creamy or buffy; unspotted below, save on sides and flanks; wings brown, the coverts glossy, all feathers edged with brownish gray; feet mahogany-red; bill yellow; eyes dark brown. In winter: Similar, but underparts as well as upperparts spotted with whitish or creamy buff; bill brown, not yellow. Young birds, before they moult into the first winter plumage, are dull grayish brown, unmarked; their bills are blackish brown. Length: About 8 inches.

RANGE IN PENNSYLVANIA.—Now found in almost every county and rapidly encroaching upon the western and more mountainous counties; exceedingly abundant in the southeastern counties, occurring locally at certain seasons in flocks of thousands.

NEST.—Of grasses, leaves, and weed-stalks, placed in a natural cavity in a tree, a woodpecker nest, or bird-box. Eggs: 3 to 6, pale blue.

Introduced from Europe about fifty years ago, the Starling has extended its range rapidly, so that it is today one of the abundant birds of most of Pennsylvania. It is very gregarious and, save in the spring, is usually seen in immense flocks, walking through fields or wheeling about in the air, with fluttering flight.



Starling, in Spring

It nests early, utilizing all available cavities, and if there are not enough to go round, it permits Flickers or Red-headed Wood-peckers to dig one and then ousts the owners so as to use the new cavity for its own nest. It has been known actually to kill Flickers in driving them from their newly made nests. As Starlings become increasingly abundant, there is grave danger of their making it difficult for some of our birds to rear their young at all.

The Starling is a great mimic. It has a characteristic, high, thin squeal and numerous chuckling notes, which it intersperses with imitations of the Wood Pewee, Bob-White, and other well-known birds. As it sings, it puffs out its throat-feathers, and during spring, shakes its wings in ecstasy.

Favorable remarks must be made concerning the food-habits of this bird. It eats, especially during spring and summer, much noxious insect life, noticeably larvæ which it finds in lawns and fields, and it preys upon the dreaded Japanese beetle. As its natural enemies come to assert themselves, it may eventually become a desirable bird citizen.

Starlings roost together in great numbers. They like to congregate in barn-lofts, cupolas or steeples, or along the high windowsills and cornices of buildings where they squeal all night as they crowd each other, or take short flights in the soft glow of the electric lights.

BOBOLINK

Dolichonyx oryzivorus (Linnæus)

OTHER NAMES.—Skunkbird; in fall, Reedbird; Ricebird.

DESCRIPTION.—Bill short, conical, and sparrow-like; tail-feathers sharply pointed. *Adult male in spring:* Glossy black, with broad patch of buffy yellow on nape and hind neck, a few streaks of yellowish on the back, and scapulars, lower back, rump, and upper tail-coverts, white, the upper part of the rump-patch grayer; tertials and greater coverts edged with buffy; underparts sometimes indistinctly barred with buffy; eyes brown; bill black; feet mahogany-red. *Female:* Sparrow-like in appearance, buffy in color, heavily streaked above, lightly on sides; a black line back of eye, and crown blackish divided by median buffy line. *Immature birds* in first fall plumage are similar to the adult female, but much lighter in appearance, sometimes quite yellow, noticeably so in the field. The adult male after a complete early spring moult is rich in appearance, the brownish tips of this plumage wearing off in forming the nesting plumage with which we are best acquainted. *Length:* 7 inches.



Bobolink, Male, in Spring

RANGE IN PENNSYLVANIA.—A summer resident, common in certain localities, almost altogether

absent elsewhere. It is to be looked for from mid-April or early May until mid-October.

NEST.—On the ground in a grassy meadow, well hidden from above and difficult to find, made of grasses and rootlets, lined with finer materials. **Eggs:** 3 to 7, pale grayish, spotted and scrawled, sometimes quite heavily, with dark brown and olive-gray.

Robert o'Lincoln is not to be found in every meadow where daisies grow, and where the grass is deep and green, but in those wide, green lowlands or grassy slopes which he has chosen for his own, the gay songster reigns supreme, flying on tremulous wings over the flowers, trailing into the grasses to let his legs and wings hang limp while he continues his bubbling song, flying boldly toward the intruder and luring him aside. The Bobolink's song is a marvel of bird-music. It seems to spring from an inexhaustible supply of strange syllables and genuine musical notes, offered in a tumultuous jumble as profligate as the manner in which the bird lets himself fall into the grass while he continues to sing. Sometimes I have thought the birds wanted to stop their song but could not. And, meanwhile, the female is warned of the approach of an enemy; she sits quietly on her nest, or slips away.

In the autumn, the birds abandon their nesting-grounds and flock in the grain-fields, garden-patches, or swamp-lands where goldenrod and rank weeds furnish food and shelter for the night. Here the yellowish young troop along, gaily calling *wink, wink* as the weed-tops bend with the weight of their plump bodies. On a cool night they rise to pass to the rice-fields of the South, where they will be shot by the thousand as the dreaded Ricebird, and thence to South America, their winter home.

COWBIRD

Molothrus ater ater (Boddaert)

OTHER NAMES.—Cow Blackbird; Blackbird.

DESCRIPTION.—Smaller than Robin; bill short, heavy, and sparrow-like. **Adult male:** Head, neck, and breast coffee-brown, with faint purple gloss; rest of plumage black, with greenish reflections over most of the surface, but bluish and purplish in certain lights. **Adult female:** Noticeably smaller than male, dull gray-brown all over, slightly streaked on underparts, and paler on throat. Young birds are similar to the female but are somewhat more buffy on the throat, and the underparts are slightly more streaked, the feathers being edged with buffy brown. **Length:** About 8 inches.

RANGE IN PENNSYLVANIA.—An abundant summer resident from about March 15 to November 1; casual in winter.

NEST.—The Cowbird builds no nest but lays its eggs in the nests of other, usually smaller, species, and does not incubate them nor care for the young in any way. The species most commonly thus parasitized in Pennsylvania are the Red-eyed Vireo, Yellow Warbler, Phoebe, Song and Field Sparrow, Ovenbird, Scarlet Tanager, and others. I have never found Cow-

bird eggs in a Red-winged Blackbird's nest, and, as a rule, Red-wings chase Cowbirds away from their home swamp angrily whenever they appear.

When the Cowbird comes in spring he is usually concerned over his mating, and while he is not a songster, he puts much energy into his high, thin squeak as he bows, almost upside down, with wings and tail outspread, in the top of some tree. This same high note is often to be heard as the birds, in groups of three or four, pass over, undulating slightly in the manner of their tribe.

On the ground, the Cowbird walks in a quiet and dignified manner. It may be seen in pastures, sometimes perching on the cows' backs

where it captures insects. I once saw a flock of them remain an entire morning near a newly born calf, evincing great interest in the little creature and its mother.

The female is an expert at locating nests. Evidently she watches smaller birds, learns where they are building their nests, and then while they are not watching her, slips in and deposits her egg. Sometimes the egg is laid long before the nest is completed. Occasionally, when an egg is thus deposited before the rightful owner of the nest has laid her eggs, the little birds build another bottom in their nest, sealing the heavy egg beneath the hair and vegetable fiber. Yellow Warbler nests are thus

sometimes several stories high, and I have more than once found eggs sealed into the foundation material of the nests of larger birds. I remember one Scarlet Tanager nest which held two eggs of the owner and four of the Cowbird, and there was an additional Cowbird egg sealed in the foundation material.

Being larger than his nest-mates, the young Cowbird claims the most attention. He may actually push the other young and eggs out of the nest.

The Cowbird's food habits are not objectionable, however, and no ill effects seem to result from this parasitism upon smaller birds.

RED-WINGED BLACKBIRD

Agelaius phoeniceus predatorius (Wilson)

OTHER NAMES.—Swamp Blackbird; Redwing; in autumn, Reedbird.

DESCRIPTION.—Smaller than Robin. *Adult male in spring*: Black, with bluish reflections and occasionally narrow rusty edgings lesser coverts bright scarlet, the outer row of largest feathers buffy or whitish; eyes dark brown; bill and feet black. *Males in first breeding plumage*: Similar but likely to be



Cowbird, Male

more marked with rusty, and some of the feathers of the scarlet patch are streaked with dark brown. *Adult males in winter:* Upperparts edged with rusty. *Adult females:* Heavily streaked with dark brown and buffy above, and with blackish and light gray below, a pinkish or orange-buffy suffusion over the face, particularly on the throat. Immature birds are similar to the females. Young birds in the moult in August and September are strangely blotched with black and buffy. *Length:* Male, about 9½ inches; female, about 8½ inches.

RANGE IN PENNSYLVANIA.—A common though somewhat locally distributed summer resident from mid-March to early November. Found as a nesting bird only where there are cat-tail swamps or low meadows. Sometimes noted in winter.

NEST.—A neatly woven basket of dry grasses suspended, usually, between cat-tail stalks a few feet above the water in a swamp, or in weeds or bushes in a low meadow. *Eggs:* 3 to 6, pale blue, spotted and scrawled, chiefly at the larger end, with black.

At about the time the hilarious tree-frogs set up their evening choruses, the Red-wing returns. His handsome plumage enlivens the stretches of dead cat-tails, and his tuneful, liquid song delights the ear. As he sings, he spreads his blazing wing-patches and fluffs out his glossy plumage. The males come north in a body before the females arrive.

The females set to work building the nests almost at once. If the weed-growth is low in the swamp, they build them but slightly above the water; those built by females which arrive later are higher. If nests are suspended upon growing cat-tail leaves or stalks, they are sometimes overturned by the unequal growth of the vegetation.

Let a hawk or Crow appear near the Red-wing's swamp, and a spirited chase ensues. Almost with a Kingbird's persistence, the brilliant males, sometimes several of them, dive and scold at the intruder, the while the smaller creatures of the swamp cease their noises and watch the busy scene.

Red-wings occasionally do considerable damage in grain-fields in late summer and early autumn, but their food habits are, for the most part, beneficial, or at least not harmful.

MEADOWLARK

Sturnella magna magna (Linnæus)

OTHER NAME.—Field Lark.

DESCRIPTION.—Size of Robin, with short tail, large, strong feet, and long, pointed bill. *Male:* Upperparts brown, the plumage of the back marked with black and margined with creamy and whitish, the tertials and



Red-winged Blackbird, Male

middle tail-feathers barred with black; line above eye, yellow in front and buffy behind; cheeks gray; throat, breast, and belly bright yellow, the breast marked with a prominent black collar; sides buffy, streaked heavily with dark brown and black; outer tail-feathers white, showing plainly in flight; eyes dark brown; bill brownish; feet flesh-color. *Female:* Similar, but duller. *Adults and young in winter:*

Much browner, the yellow of the breast considerably clouded by brown tips of the new plumage, which wear off as spring approaches. *Length:* 10½ inches.

RANGE IN PENNSYLVANIA. — An abundant summer resident from mid-March until November; casual, sometimes fairly common, in winter, if food is available.

NEST. — A depression in the ground, in a wide field, among deep grasses, lined with dry grass, the surrounding green grass pulled into an arch above.

Eggs: 3 to 6, white, spotted with reddish brown, chiefly at the larger end. Meadowlark nests may sometimes be found by dragging a rope, loosely stretched between two persons, across the meadow.

The high, clear whistle of the Meadowlark, as he perches in a tree or stands erect on the ground, is a familiar bird-song of the early spring. His bright breast glows in the sunshine as he stands for an instant, then disappears altogether as he lowers his head and walks through the grass. Let him slip out of sight for a second, and it may be difficult to see him again, for he is protectively colored, the margins of the feathers of his back forming lines which resemble the dead grasses. As he flies, his wings beat in a muscular fashion and the white outer feathers of his short, widespread tail show plainly. If his nest is nearby, he may perch on a post and call with a rough chattering as he flashes his tail energetically.

The Meadowlark's food habits are chiefly beneficial. It eats many grubs and cutworms, confining most of its foraging to the ground.

In the early fall, they sometimes congregate in great flocks, during the latter part of the period of moult. They do not usually sing at such times, but when the new plumage is complete, and the day warm, the whole flock may begin to sing, with remarkable effect.

ORCHARD ORIOLE

Icterus spurius (Linnaeus)

OTHER NAME. — Orchard Bird.

DESCRIPTION. — Smaller than Baltimore Oriole. *Adult male:* Head and neck, back, wings, and tail black, the greater coverts and secondaries edged with white; breast, belly, rump, upper tail-coverts and lesser coverts of wing,



Meadowlark

rich deep chestnut. *Female*: Olive-gray above; yellow on face, underparts and rump; wings with two whitish bars. The male in its first breeding plumage is like the female, but has a black throat-patch. *Length*: A little over 7 inches.

RANGE IN PENNSYLVANIA.—A rather rare and exceedingly local species, found chiefly in the southern counties, but occasionally as far north as Crawford County in western Pennsylvania. It arrives in late April or early May and remains until September 15.

NEST.—A pouch of grass which is green when the nest is constructed, usually swung between upright twigs at the top of a small tree—rarely in a conifer. The nest is not so deep as that of a Baltimore Oriole and is never swung at the tip of a drooping branch, so far as I know.

The exceedingly bright and varied song of this species may puzzle the bird student who hears it for the first time. It is hardly deliberate enough to suggest an Oriole, but it is full-throated and tropical in fervor and decidedly noticeable. The flight is characteristic, giving the impression that the wings are never lifted above the back. Orchard Orioles are likely to nest in groups, several pairs in one neighborhood. They are so irregular in their occurrence that the bird student must watch assiduously for them.

BALTIMORE ORIOLE

Icterus galbula (Linnæus)

OTHER NAMES.—Hang-bird; Hang-nest; Golden Robin.

DESCRIPTION.—Smaller than Robin. *Adult male*: Head, neck, back, wings, and tail, black; lesser coverts orange; tertials and greater coverts edged with white; outer tail-feathers tipped with orange or yellow; breast, belly, rump, and upper tail-coverts, bright orange, deepest on breast. *Female*: Olive-brown above, yellow below; breast somewhat tinged with orange; wings with two noticeable buffy yellow bars; tertials prominently edged with whitish. Immature birds are similar to the female. Eyes dark brown; bill and feet blue-gray. *Length*: $7\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—An abundant summer resident from latter April to early fall. It is not often seen in the fall as it usually leaves before the middle of September.

NEST.—A deep pouch of plant-fibers, horse-hair, and string, lined with soft materials, swung from the tip of a branch, usually of an elm, maple, or sycamore, 15 to 60 feet from the ground. *Eggs*: 4 to 6, white, scrawled with blackish, chiefly at larger end.

The male Oriole is one of our most gorgeous birds, with his bright colors and loud, assertive song. In the full-flowered apple trees, the dignified creature crawls about, nipping at buds or snatching up insects. The female builds the nest, and the young call for food



Orchard Oriole, Male

incessantly, often attracting attention to it. Some of the Oriole's call-notes and alarm-notes are exceedingly harsh and grating, calling to mind the tropics, their ancestral home.

RUSTY BLACKBIRD

Euphagus carolinus (Müller)

DESCRIPTION.—Smaller than Robin. *Adult male in spring*: Entire plumage glossy blue-black; bill and feet black; eyes pale yellow. *Adult female*: Slate color, somewhat glossy above; wings and tail blackish. *Adult male in winter*: Black, all the feathers edged with buffy brown, the top of the head almost solid brownish. Young birds in their first winter plumage are chiefly responsible for the name of the bird. They are rusty brown, paler on head, richest on back, with slate-colored wings and tail, a dark line through the eye, and pale yellow eyes. *Length*: 9½ inches.

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant, sometimes abundant, from early or mid-March (sometimes earlier) to early May and from September 10 to November 15. It usually occurs in flocks.

This is our *blackest* Blackbird in the spring; in the fall it is hardly a black bird at all. Look for this species in swampy situations or along the margins of streams. It likes to walk about on the ground and *through water* like a sandpiper, and is more terrestrial than the Red-wing. The spring flocks sometimes burst forth into song, and the effect at a distance is that of sleigh-bells—a jangling, jolly chorus. A single male's efforts hardly merit being called a song. Rusty Blackbirds are grackle-like in actions, and their whitish eyes suggest grackles, but they do not have trough-shaped tails and the tail-feathers are about of equal length.

PURPLE GRACKLE AND BRONZED GRACKLE

Quiscalus quiscula ridgwayi Oberholser

and

Quiscalus quiscula æneus Ridgway

OTHER NAMES.—Blackbird; Crow Blackbird.

DESCRIPTION.—Males larger than Robin, with large tails, distinctly trough-shaped, especially in flight. The male Purple Grackle's head and neck are brilliant, iridescent blue and violet; the body, which appears blackish at a distance, is glossed with blue, green, plum-color, and bronze, and the back and scapulars, and sometimes the sides, are crossed with iridescent bars. The male Bronzed Grackle's head is iridescent greenish blue, with little or no violet reflection, and the body is rich, glossy bronze, without iridescent bars. In both these forms the females are similar but duller, and noticeably smaller. The eyes of all are pale yellow. Young birds are dull brown and, when quite young, have grayish eyes which turn to pale yellow as the bird grows older. *Length*: Male, 12 to 13½ inches.

RANGE IN PENNSYLVANIA.—The Purple Grackle is found *east of the Alleghany Mountains*; the Bronzed Grackle occurs west of the Alleghanies. In the mountainous sections the forms intermingle to a certain extent. Grackles are abundant summer residents from mid-March to November.

NEST.—A large, amply cupped structure of grasses, weeds, and other materials, sometimes strengthened with mud, usually built in a coniferous tree, in a yard, or on a campus, from 20 to 60 feet from the ground, but also built in willows, in bridges, high buildings, and rarely among cat-tails. *Eggs:* 3 to 7, pale blue, gray, or whitish, scrawled and blotched with brown, black, and gray.

This is the bird which is everywhere called "Blackbird." It is a bird of the town, not of the wilds, preferring to nest in parks, cemeteries, and college campuses, among the pines, spruces, or cedars. It eats many cutworms, but does some damage in grain-fields, and in destroying fruit.

Grackles walk sedately about the lawns, their white eyes gleaming with a ghostly brilliance. The call-note is a harsh *tschack*.



Purple Grackle

EVENING GROSBEAK

Hesperiphona vespertina vespertina (W. Cooper)

DESCRIPTION.—Smaller than Robin; beak very large and heavy. *Male:* Forehead, line over eye, scapulars, lower back and rump, sides of breast and belly, dull yellow; crown and most of wing brownish black; secondaries and their greater coverts white, a prominent field-mark; rest of plumage olive-brown. *Female:* Grayish, the back and scapulars faintly washed with olive-yellow; wings, tail, and upper tail-coverts considerably spotted and marked with white; tips of the inner webs of all the tail-feathers, white; bill pale yellowish gray. *Length:* 8 inches.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitant, noted chiefly in the northern counties. In Pike and Tioga counties it has been noted with some regularity during the latter part of recent winters. It is usually to be seen in small flocks and it often occurs in towns.

Evening Grosbeaks see so little of man in their wilderness home in the Great Northwest that they are surprisingly unsuspicious when they visit us during the winter. They are sociable, almost always being seen in flocks, and

they feed upon seeds of maple and other trees, upon frozen apples, and upon berries which they find, notably those of the mountain ash. Occasionally they visit the leafless shade trees of towns.



Pine Grosbeak
Evening Grosbeak

PINE GROSBEAK

Pinicola enucleator leucura (Müller)

DESCRIPTION.—About the size of a Robin; a small bunch of bristling feathers over the nostrils; bill sparrow-like, but upper mandible somewhat curved like a parrot's. *Adult male:* Gray, suffused with soft rose-red, principally on the crown, rump, upper tail-coverts, and breast; wings and tail dark brownish gray, the wings with two prominent white bars. *Adult female:* Gray, the crown, rump, upper tail-coverts, and breast more or less strongly suffused with yellowish or olive; the wings and tail as in the male. Immature males resemble the adult female, but are brighter. *Length:* 9 inches.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitant recorded from many sections of the Commonwealth, but doubtless of most frequent occurrence in the more northerly counties.

The Pine Grosbeak has been well named. So fond is it of coniferous trees and the food it finds among the needles and buds that its bill is frequently covered with resinous substances. In Pennsylvania the bird also eats the berries of mountain ash, sumac, and similar plants. It is sometimes quite unsuspicious, being unacquainted with the ways of man, and will allow the observer to approach very closely. The call-note is a clear, bell-like whistle; its full song is rarely to be heard in this latitude. (See illustration, page 103.)

PURPLE FINCH

Carpodacus purpureus purpureus (Gmelin)

OTHER NAME.—Linnet.

DESCRIPTION.—Size and general proportions of English Sparrow; nostrils covered with small, bristly feathers; tail slightly forked. *Adult male:* Head and breast rosy pink, *not purple*, some of the feathers with dusky tips, and a darker streak through the eye; back brownish gray, streaked and suffused with rose-color; wings and tail brownish; belly whitish; sides somewhat streaked with brownish. *Adult female:*

Very sparrow-like in appearance, in fact closely resembling a female English Sparrow, but the whitish underparts heavily streaked with dark brown. The immature male is much like the female, and this plumage is held through the first nesting season, the subsequent moult leading into the rose-red plumage of the full adult. *Length:* A little over 6 inches.

RANGE IN PENNSYLVANIA.—A fairly common and regular migrant throughout, from mid-March to mid-May and from September 15 to October 31. As a summer resident it is found only in the northern and mountainous counties, and it is decidedly local as a nesting bird. It is irregular, though at times common, in winter.



Purple Finch
Upper, Female; Lower, Male

NEST.—A neat structure, with wide, full cup, constructed of plant-stems and fibers, lined with finer materials, placed in a conifer, orchard tree, or sapling at from 20 to 40 feet from the ground. *Eggs:* 3 to 5, pale blue, wreathed about the larger end with spots and lines of black.

The lovely Purple Finch is all too little known. It occurs at some time during the year at every locality in Pennsylvania, yet it is not a familiar bird. The song alone should win it wide acclaim as a bird-neighbor, for, delivered from the top of a tree, or from a vine or weed, it is one of the brightest, most varied of our bird melodies and is given with such enthusiasm that we recognize in the singer a canary-like interest in prolonging the performance.

Purple Finches are often seen among the budding branches of a fruit tree, balancing on the slender twigs as they eat buds and capture occasional insects. The females are virtually silent, until they have cause to depart, then they swing off into the air, bound merrily higher and higher above the tree-tops, and make off as they call *tik, tik* in a characteristic tone. This important call-note should be remembered; it often serves to identify the species when the colors cannot be seen.

In its nesting-range, the song of this Finch is to be heard during all the spring and early summer days. At Pymatuning Swamp, restless males sang almost constantly while their mates assembled nesting materials. An ecstatic flight-song is frequently given when the bright male flutters high into the air and, still singing, descends on trembling wings to the twigs and new leaves.

The Purple Finch's habit of eating buds and flowers of trees, including valuable orchard varieties, causes it to be unpopular when it is too common.

RED OR AMERICAN CROSSBILL

Loxia curvirostra pusilla Gloger

DESCRIPTION.—Size and general shape of English Sparrow, but mandibles sharply pointed and crossed. *Adult male:* Deep dull red, brightest on rump, brownish on back; wings and tail brownish black. *Female:* Dull olive-green, yellowish on the rump; head and back indistinctly streaked with blackish; underparts mixed with whitish. *Immature male:* Like the female, with some red mixed in the plumage. *Length:* 6 inches.

WHITE-WINGED CROSSBILL

Loxia leucoptera Gmelin

DESCRIPTION.—Size and shape of English Sparrow. *Male:* Dull rose-pink, brightest on rump, more or less streaked with blackish on back; wings and tail black, the wings with two prominent white bars, the tertials sometimes tipped with white; belly and under tail-coverts whitish. *Female:* Dull grayish green, yellowish on the rump, grayish below, the wings, as in the male,

with two prominent white bars. *Immature male:* Similar to the female, but mottled irregularly with pink. *Length:* 6 inches.



Red Crossbill
White-winged Crossbill

RANGE IN PENNSYLVANIA.—Both Crossbills are irregular winter visitors, sometimes abundant. They are usually found among coniferous trees. The Red Crossbill nests rarely in our higher mountains among the coniferous trees.

These two species are nearly always to be found together during winter, and in any plumage may be recognized by their wings, those of the White-winged species *always* having two wing-bars, those of the Red Crossbill never being marked. The Crossbills feed upon seeds of hemlock, pine, and spruce, which they secure by wrenching off the scales of the cones with their sharply pointed and crossed beaks.

REDPOLL

Acanthis linaria linaria (Linnæus)

DESCRIPTION.—Smaller than an English Sparrow; conical bill, sharply pointed; nostrils covered with tufts of bristling feathers. *Adult male:* Crown bright red; chin and upper throat blackish; neck and back grayish brown, streaked with buffy and whitish; rump grayish, tinged with pink; wings and tail dark brown, the wings with two white bars; breast and cheeks washed with delicate rosy pink; belly white; sides buffy streaked with blackish. *Female:* Similar, but more heavily streaked above and without pink on breast or rump. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitor from the Far North. It sometimes occurs during the entire winter, but it is usually seen during the latter part, and chiefly in the northern counties.

Redpolls, like Goldfinches, swing about through the air with strongly undulating flight. They give a rasping, querulous squeal as they lift their crests and watch us. The birds are fond of weed seeds which they pick up from the snow. Usually they sit with feathers considerably fluffed out, and at such times the rosy breast of the male is noticeable.



Redpoll

GOLDFINCH

Astragalinus tristis tristis (Linnæus)

OTHER NAMES.—Salad Bird; Wild Canary; Thistle Bird; Yellow Bird.

DESCRIPTION.—Smaller than English Sparrow; bill sharply pointed. *Adult male in summer:* Bright lemon-yellow with black crown, wings, and tail, the wings crossed with two white bars, the lesser coverts yellow like the

body, and the tail-feathers with their inner webs white; upper tail-coverts gray. *Adult female in summer:* Upperparts yellowish brown, the crown unmarked; below, dull yellowish; wings and tail more or less as in male, but not so black, nor so strikingly marked; lesser coverts dull olive-green. *Adult male in winter:* Like adult female, but *lesser wing-coverts yellow*; breast dull yellow; belly whitish; sides brownish. *Young male in winter:* Similar but the *lesser wing-coverts are dull greenish or grayish*. *Young males in summer:* Like the adult but the lesser coverts are dull greenish or grayish. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—A common permanent resident, somewhat irregular in winter, and often not known as a winter bird because of the complete change of color and habits.

NEST.—A compact, neatly built cup of weed-stalks and vegetable fiber, lined with soft materials, placed from 3 to 30 feet from the ground, often in a shade tree, on a branch extending over the highway. *Eggs:* 3 to 6, pale blue.

The Goldfinch is comparatively unknown as a winter bird. With the change of color the birds become wilder in disposition, no longer frequent the lawns and roadsides, and band together in large flocks. In summer the brightly colored males are very noticeable as they swing about among the flowers in a field or perch on dandelions in the yard. They are brilliant singers, even in winter, and may be recognized at a great distance in the summer by the flight-song, which has been written *per-chick-o-ree*, and which is repeated with each bound of the deeply undulating flight.

This bird nests very late, eggs being laid in latter June and July. In spring they are sometimes considerably mottled in appearance, as the brown winter plumage drops out and is replaced by the yellow of summer. This prenuptial moult is usually complete by the middle of May, or earlier, and with the brighter plumage return all the familiar call-notes and graceful motions which we associate with these attractive birds.

Goldfinches are fond of sunflower and cosmos seed, and we may lure them to the garden, perhaps for the entire year, by planting such flowers as these regularly.

PINE SISKIN

Spinus pinus pinus (Wilson)

OTHER NAME.—Pine Finch.

DESCRIPTION.—Smaller than English Sparrow; bill sharply pointed; a tuft of small feathers over nostril. Upperparts grayish brown streaked



with black, the feathers margined with buffy; wing-feathers edged with yellowish and *yellow at base*; tail dark gray-brown, neatly forked, all but middle feathers *yellow at base*; underparts white, washed with buffy and heavily streaked with black. *Length:* 5 inches.



Pine Siskin

RANGE IN PENNSYLVANIA.—A somewhat irregular migrant in April and May and in September and October; sometimes very common. Irregularly abundant in winter. It has been known to nest in the mountainous counties.

When winter flocks of these sociable finches visit Pennsylvania, the birds feed largely upon the seeds of hemlock and alder.

Merrily they bound about through the air, giving their rough, querulous squeal. In looking for this bird, remember that the heavily streaked underparts and the yellow on the wings and tail are unmistakable. Siskins will sometimes be found feeding among the alders, not far from the ground. They often wander about with flocks of Goldfinches.

ENGLISH SPARROW

Passer domesticus (Linnæus)

OTHER NAMES.—Sparrow; House Sparrow.

DESCRIPTION.—*Male:* Chin and throat black; crown gray; cheeks whitish; back of head, neck, and back reddish brown, the back streaked with black; a prominent white wing-bar; underparts grayish white; wings and tail dull brown. *Female:* Grayish brown, with an indistinct wing-bar, a darker line through the eye, and a rather distinct superciliary line. *Length:* About 6 inches.

RANGE IN PENNSYLVANIA.—An abundant permanent resident, principally in the towns and on the farms.

NEST.—A bulky mass of dry grasses, usually domed over and lined warmly with feathers, placed in crevices in buildings, in bird-houses, in cavities in trees, and rather rarely on a branch of a tree. *Eggs:* 4 to 6, white, spotted with gray.

The amateur bird student may do well to fix definitely in his mind the size and appearance of this abundant bird, since it is advisable to know these when making the acquaintance of other bird friends, and especially when studying the rather difficult sparrow group.

English Sparrows are not altogether objectionable. During summer they prey upon almost all kinds of insects, including the hard-shelled and disagreeably scented insects which many birds pass by. Nevertheless, we regret that these birds are so abundant because of their tendency toward driving out some of our more beautiful native birds.

SNOW BUNTING

Plectrophenax nivalis nivalis (Linnæus)

OTHER NAMES.—Snowflake; Snow Bird.

DESCRIPTION.—A little larger than an English Sparrow. *Male in winter:* Upperparts dull reddish brown, darkest on the crown; feathers of back with partly concealed black bases, causing a streaked effect; outer primaries black, white at base; secondaries white; middle tail-feathers black, outer ones white; underparts white. *Female:* Similar, but duller, and with primaries all dark brown, and white secondaries somewhat tipped with dusky. *Length:* 6 $\frac{3}{4}$ inches.

RANGE IN PENNSYLVANIA.—A rare and irregular winter visitant, save at Erie, where it is fairly regular and sometimes common on the outer beaches from November to early March. It is occasionally seen in small flocks in other northern counties.

A single Snow Bunting in flight might suggest to the bird student an albinistic sparrow of some sort, but a whole flock of the remarkably colored creatures, as they swing over a dead weed-field, can but bring the instantaneous thrill which a glimpse of such exotic creatures always brings. Snow Buntings are usually seen in flocks, often in company with Horned Larks or Tree Sparrows, their companions in the North Country, and they have a jovial twitter.

The Lapland Longspur (*Calcarius lapponicus lapponicus*) occurs rarely during early spring or late fall migration, or in winter. It is about the size of an English Sparrow, and in winter has a concealed reddish patch on the neck, a concealed blackish belly, and is to be seen in fields where it sometimes associates with Snow Buntings, Horned Larks, or Tree Sparrows.

VESPER SPARROW

Poecetes gramineus gramineus (Gmelin)

OTHER NAMES.—Grass Finch; Grass or Ground Sparrow; Bay-winged Bunting; Road Sparrow.

DESCRIPTION.—Size of English Sparrow. General appearance grayish above, lighter below, considerably streaked above and on breast and sides; outer tail-feathers white; lesser wing-coverts reddish brown, not particularly conspicuous save at close range. *Length:* 6 inches.

RANGE IN PENNSYLVANIA.—A common summer resident from early April to late October. It is not found in woodlands.

NEST.—A cup in the ground, in an open field, lined with grasses, hair, and other fine material. *Eggs:* 3 to 5, white, spotted and scrawled, chiefly at larger end, with blackish.

The Vesper Sparrow is not very easily



Savannah Sparrow
Vesper Sparrow

recognized by its appearance alone, as it stands on the ground or on a fence-post, but if the bird student will remember that this species is always found in the open, never at great distance from the ground, and that the *white outer tail-feathers always show in flight*, identification should be easy. The bright song is given with great enthusiasm, often in a remarkably beautiful evening chorus. At the beginning of this song we usually hear two accented descending whistles which stand out more prominently than any other portion of the warbling performance. Look for Vesper Sparrows along fields and roadsides in country districts.

SAVANNAH SPARROW

Passerculus sandwichensis savanna (Wilson)

DESCRIPTION.—Smaller than English Sparrow. General appearance above, gray, considerably streaked, and with white underparts considerably streaked on breast and sides with black; line above eye pale yellow, not noticeable in field save at close range in ideal light; a blotch of blackish in middle of breast. Length: 5½ inches.

RANGE IN PENNSYLVANIA.—A fairly common but not often recorded migrant, and a local and sometimes common summer resident, particularly in the central and northern counties, from early April to mid-October.

NEST.—A depression in the ground, in an open field, lined with grasses and other soft material. Eggs: 4 to 6, pale bluish or bluish green, irregularly and sometimes heavily spotted with brown.

Look for the Savannah Sparrow in spring and summer only in wide, open fields where the grass is short. Here a slight, buzzing, trilling song may be heard from a sparrow which is *prominently streaked below*, and which has much the appearance of a Song Sparrow, but does not bob its tail as it flies, nor seek cover in bushes. If the bird student will remember that this species is to be found only in wide fields, usually when there are no bushes, and that there are no prominently white outer tail-feathers, as in the Vesper Sparrow, he may find this little-known bird fairly common in his region. In fall it is found in weed-patches along roads or in bushy fields. (See illustration, page 109.)

GRASSHOPPER SPARROW

Ammodramus savannarum australis Maynard

OTHER NAMES.—Yellow-winged Sparrow; Yellow-winged Bunting.

DESCRIPTION.—Smaller than English Sparrow. Tail-feathers rather short and pointed. *Adult male*: General color buffy brown, the upperparts streaked with black and margined with whitish, in characteristic pattern; bend of the wing yellow (this mark usually not evident in the field); forepart of superciliary line yellow, noticeable in good light in the field. *Female*: Similar, but duller. Length: 5½ inches.

RANGE IN PENNSYLVANIA.—A rather local summer resident throughout, from late April or early May to September 15. It is found only in more or less flat, wide meadows, not usually in marshy places, and never in woodlands.

NEST.—A depression in the ground beneath a clump of grass, lined with fine, dry grasses. *Eggs:* 4 or 5, white, spotted, chiefly around the larger end, with reddish brown.

Here is a bird which will more than likely pass unnoticed unless the fine, insect-like song is heard. Some bird students never realize that this species nests in their region, for they never hear this song, and they have not the patience to trail about after every little brown bird they see. The Grasshopper Sparrow's song is dry, unmusical, and buzzing, and it seems a fitting accompaniment to hot midsummer fields which are covered with dust and upgrown with coarse weeds. The bird is almost never seen, save while it is singing from the top of a weed or from a fence-post. On the ground it disappears almost at once, for its colors are highly protective. The flight is fluttering and somewhat erratic. If the bird flushes from the grass, it usually does not alight near at hand, but zigzags to a far corner of the field and drops into the grass.

The smaller Henslow's Sparrow (*Nemospiza henslowii susurrans*) has a greenish cast over the head and neck. This retiring, unmusical little bird occurs in Pennsylvania as a very rare and exceedingly local summer resident. Its ludicrously short song, *chis-lick*, is to be listened for in low meadows where the grass is thick and deep. Additional records of this species are very desirable.

The Nelson's Sparrow (*Ammospiza caudacuta nelsoni*) occurs at Erie as a migrant, particularly in the fall.

WHITE-CROWNED SPARROW

Zonotrichia leucophrys (J. R. Forster)

DESCRIPTION.—One of the larger sparrows, being larger than an English Sparrow. *Adult male:* Crown white, with two broad black streaks along either side and a blackish streak through eye; rest of upperparts grayish brown, considerably streaked; underparts clear light gray, palest on throat and belly, and somewhat brownish on sides. *Adult female:* Similar, but duller. *Immature:* Similar, but crown buffy and brown, and underparts more buffy. *Length:* A little under 7 inches.

RANGE IN PENNSYLVANIA.—A regular and fairly common migrant throughout from latter April to May 20 and from October 1 to 20.

The large size and noticeable markings of this sparrow make it comparatively easy to identify. It is not often so common as its near and similar relative, the White-throated Sparrow, from which



Grasshopper Sparrow
Henslow's Sparrow

it differs in having no yellow before the eye or on the bend of the wing, and *no white throat-patch*. The song of the White-crowned Sparrow is composed of soft, rich whistles which have a plaintive character, similar to that of the well-known White-throat's *peabody* song, with an additional rough undertone between the first and latter parts of the song. The White-crown, while in Pennsylvania, nearly always occurs in flocks, usually in the woodlands, in brush-piles, or along hedges. Remember that a bird with a white crown need not necessarily be this species, for the White-throat also has such a crown; but the plain gray throat of the White-crown is usually easy to detect in the field, since the birds are not wild. All members of the sparrow tribe are seed eaters.



WHITE-THROATED SPARROW

Zonotrichia albicollis (Gmelin)

OTHER NAME.—Peabody-bird.

DESCRIPTION.—A little larger than an English Sparrow; similar in general appearance to the White-crowned Sparrow. *Adult male*: Crown white, marked laterally with two black bands which extend backward to nape; forepart of superciliary line *yellow*; rest of upperparts rich brown, streaked with black and margined with grayish; bend of wing *yellow*, *not usually noticeable in field*; chin and throat pure white, in contrast with gray of breast; belly whitish; sides washed with brownish. *Female and young*: Similar but duller. Length: $6\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A regular and abundant migrant throughout, from mid-April to May 20 and from September 15 to November 1.

The clear, fragile whistle of the White-throat is one of our most beautiful bird-notes, and is a familiar song of the spring woodlands. It has been written as *sweet, sweet, peabody, peabody, peabody*. The white throat and yellow spot in front of the eye must be looked for in this species. A trained observer can recognize the White-throat easily by its characteristic, rather metallic, call-note, but the beginner had best depend on the markings of the bird which are easy to note. Sometimes these birds are common about lawns in towns.

TREE SPARROW

Spizella arborea arborea (Wilson)

DESCRIPTION.—About as long as, but slenderer than, an English Sparrow; tail longer proportionately than an English Sparrow's. Crown-patch bright rufous; rest of upperparts brownish gray, streaked with black and reddish

brown; wing with two noticeable white wing bars; underparts brownish gray, whitish on chin and throat, and in middle of belly; a dusky spot in center of breast. *Female:* Similar but duller. *Bill yellow with dusky tip.* *Length:* About 6 inches.

RANGE IN PENNSYLVANIA.—A winter visitant from the Far North, arriving in October and remaining until late March or April.

The Tree Sparrow is a bird of weedy fields and hedges. In flocks they search for seeds which have fallen upon the snow. When the winter sun shines they call in companionable and softly musical notes. In spring the Tree Sparrow has a gay, somewhat warbler-like song, which I believe is not very well known among our bird students. The Tree, Field, and Chipping Sparrows are similar in appearance. Identification of these birds should not be difficult, however, if one remembers that the Tree Sparrow is a *winter* bird, while the Field and Chipping Sparrows usually arrive in spring after the Tree Sparrows have returned north. If by some chance the three sparrows do occur together, remember the black spot in the breast of the Tree Sparrow and the yellowish bill, field-marks which the other two species do not have.



Tree Sparrow

CHIPPING SPARROW

Spizella passerina passerina (Bechstein)

OTHER NAME.—Chippy.

DESCRIPTION.—A small, slender sparrow, noticeably smaller than the English Sparrow. *Male:* Crown bright reddish brown; forepart of crown and line through eye black; line above eye whitish; rest of upperparts grayish brown, streaked with black; chin and throat white; rest of underparts grayish; *bill black.* *Female:* Similar, but duller. In winter both sexes are similar but they are much more streaked, particularly on the crown. *Length:* Under $5\frac{1}{2}$ inches.



Field Sparrow
Chipping Sparrow

RANGE IN PENNSYLVANIA.—An abundant summer resident from early April to mid-October.

NEST.—A neat cup made of fine weed-stalks and grasses, lined almost invariably with horse-hair, and placed in a low bush or rose vine, or sometimes at some distance from the ground in an evergreen tree. *Eggs:* 3 or 4, delicate blue, wreathed about the larger end with black spots and scrawls.

Look for the Chippy, as a rule, *only near houses or farms.* It is not a bird of

the wilds, and because of its confiding disposition has come to be associated with our very doorsteps. The monotonous, though cheerful, chipping song of this bird is familiar to all who listen for bird-calls. So rapidly are the chips of its song given that it is almost impossible to imitate it. Remember the *black bill* and unmarked underparts of the Chipping Sparrow.

FIELD SPARROW

Spizella pusilla pusilla (Wilson)

DESCRIPTION.—Size small; this is one of our slenderest, smallest sparrows. **Male:** Crown-patch rufous; upperparts grayish brown, streaked with black and rufous; wings with two prominent white wing-bars; underparts whitish, unmarked; *bill pink*. **Female:** Similar but duller. **Young:** Similar but somewhat more streaked. **Length:** 5½ inches.

RANGE IN PENNSYLVANIA.—An abundant summer resident from early April to mid-October, and occasionally later.

NEST.—A neat cup made of fine grasses and slender weed-stalks, lined usually with finer grasses and, as a rule, not with hair, placed on the ground among weeds or in a low, thick bush in a pasture or field. **Eggs:** 3 to 5, bluish white, spotted with reddish brown.

The clear, whistled trill of the Field Sparrow is a welcome promise of spring, as the bird, just returned from the south, sings in the brown fields. This song is often but a simple repetition of the same note, becoming more rapid toward the end and running into a sort of trill.

This bird is rather shy, and in flying away gives us a rather unsatisfactory glimpse of fairly long tail and grayish rump. If we look carefully at the little creature with a glass, we note the white wing-bars, the dark eye which is surrounded with a grayish ring, and the *pink bill*. (See illustration, page 113.)

SLATE-COLORED JUNCO

Junco hyemalis hyemalis (Linnæus)

OTHER NAMES.—Snow-bird; Junco.

DESCRIPTION.—About the size of an English Sparrow, but with a longer tail. **Male:** Head, neck, breast, and upperparts slaty gray, sometimes brownish on the wings and back, the *outer tail-feathers pure white, always showing in flight*; *bill pink*, narrowly tipped with dusky. **Female and young:** Similar, but duller and often browner. **Length:** A little over 6 inches.

RANGE IN PENNSYLVANIA.—Best known as a winter visitant from October 1 to about the first of May, or later; rather rare and local as a summer resident in the higher mountains.

NEST.—A cup of fine grasses, built in a bank in woodlands. **Eggs:** 3 to 5, white, spotted with brown.



Slate-colored Junco

The Junco is easy to recognize anywhere, because the dark plumage of its back contrasts so startlingly with the white outer tail-feathers. Its song is not so easy to recognize, however, being a rather musical chipping song, resembling that of the Chipping Sparrow, but more deliberately given. Juncos do not often sing during the winter, but with return of spring they trill in the sunlit corners of the woods where they feed upon weed-seeds. Nesting records of the Junco in Pennsylvania are desirable.

SONG SPARROW

Melospiza melodia melodia (Wilson)

OTHER NAME.—Ground Sparrow.

DESCRIPTION.—About the size of an English Sparrow, but with relatively longer tail; sexes similar. Above, rich brown streaked with grayish and black; a rather distinct gray superciliary, and a buffy streak back from lower mandible; underparts white, heavily streaked with black, especially on breast and sides; a blotch in the center of the breast.
Length: A little over 6 inches.

RANGE IN PENNSYLVANIA.—In much of Pennsylvania the Song Sparrow is abundant the year round; it is migratory, however, to an extent, and summer-resident individuals may be replaced during winter by birds from farther north.

NEST.—A neat cup built of grasses, lined with finer materials, and usually with rather bulky foundation, built on the ground in a sheltered situation or in a low bush. *Eggs:* 3 to 6, greenish or grayish white, rather heavily spotted with brown.

The Song Sparrow's heavily streaked underparts will distinguish it from all other sparrows, save the rare Lincoln's Sparrow, the Savannah Sparrow, which is found only in wide, open fields, the Fox Sparrow, whose tail is bright reddish brown, and the female Purple Finch. Look for Song Sparrows along brooks among the bushes. As the brown birds fly away, their rounded tails pump rather regularly.

The song is bright and varied, with usually two or three accented, repeated notes which give it a syncopated rhythm, and is generally delivered from the topmost twig of a bush or low tree.

Lincoln's Sparrow (*Melospiza lincolni lincolni*) is a little-known migrant in May and September, which may be far commoner than is supposed. It looks much like the Song Sparrow but has a *buffy area across the chest* and the streaking of the underparts is finer. Look for this species along the brushy margins of streams. The



Song Sparrow
Swamp Sparrow

song, which is a remarkably sprightly, gurgling performance, is quite unlike that of any other sparrow which I have heard.

Bachman's Sparrow (*Peucaea aestivalis bachmani*) is a very rare summer resident, known from southern counties only. This species looks like a Song Sparrow but it has no streaks on the underparts. It is found on brushy hillsides.

SWAMP SPARROW

Melospiza georgiana (Latham)

DESCRIPTION.—A little smaller than an English Sparrow, with the proportions of a Song Sparrow. *Male in summer*: Crown rich reddish brown; rest of head gray, a black line through the eye, and a buffy streak extending backward from the lower mandible; back reddish brown streaked with black, the feathers margined with grayish; *no wing-bars*; underparts grayish, the sides washed with olive-brown. *Female*: Similar, but duller. *Male in winter*: Somewhat streaked crown-patch and duller in general appearance. Length: A little under 6 inches.

RANGE IN PENNSYLVANIA.—A migrant in latter April and May and in September and October; in the northern counties and at higher altitudes, locally, it occurs as a summer resident, nesting where there are suitable marshes.

NEST.—Of grasses, with bulky foundation and neat cup, usually placed a few inches from the ground or above water, in a clump of weeds or in cat-tails. EGGS: 3 to 5, pale blue, blotched and spotted irregularly with brown.

Look for the Swamp Sparrow, as a rule, only in marshy country. The gray, unstreaked underparts, the red-brown crown-patch, and a shy, furtive manner characterize this species. Its song, which is usually delivered from a cat-tail or high weed-stalk, but often from a hidden spot among the weeds, is somewhat like a Chipping Sparrow's, with the chips given much more slowly and loudly. (See illustration, page 115.)

FOX SPARROW

Passerella iliaca iliaca (Merrem)

DESCRIPTION.—Larger than an English Sparrow. *Male*: Rich, warm brown on crown and back, these regions somewhat streaked; superciliary line and neck gray; ear-coverts brown; *slight wing-bars*; rump, upper tail-coverts, and tail bright reddish brown, very noticeable in the field, particularly

when the bird is in flight; underparts white; breast and sides heavily streaked with black. *Female*: Similar, but duller. Length: A little over 7 inches.

RANGE IN PENNSYLVANIA.—A common and regular migrant from mid-March (sometimes earlier) to April 20, and from early October to November 15. It is one of the earliest of the spring migrants.



Fox Sparrow

Its rich red-brown rump and tail are sufficient to distinguish this bird from the other sparrows, but not always from the Hermit Thrush, a bird with a surprisingly similar color-pattern when seen from the rear or in flight. The thrush has a slenderer bill, of course, and has the habit of elevating the tail when it alights. Usually, the Fox Sparrow occurs in flocks; in spring it indulges itself in song—a rich, ringing melody, among the most impressive of our sparrow songs. The call-note is a heavy *tschüp*, somewhat like the alarm-cry of the Brown Thrasher. Look for the Fox Sparrow in thick woodlands, among grapevines and similar tangles. This species responds readily to squeaking.

TOWHEE

Pipilo erythrophthalmus erythrophthalmus (Linnaeus)

OTHER NAMES.—Chewink; Ground Robin; Swamp Robin; Joree; Guffee (local).

DESCRIPTION.—A little smaller than a Robin, with long tail and comparatively short wings. *Male*: Head, neck, upper breast, and upperparts black, the base and part of the outer web of the primaries, and spots on the tertials, white; three outer tail-feathers with white tips, the outer web of the outer feather entirely white; sides and under tail-coverts rich reddish brown, bordered irregularly with black spots along sides of belly; belly white; eyes bright red; bill black. *Female*: Similar in pattern, but black of male replaced throughout by rich, grayish brown, quite bright in some individuals; eyes bright reddish brown. Length: 8½ inches.

RANGE IN PENNSYLVANIA.—An abundant migrant and summer resident in all woodlands, usually from early or mid-April to late October or later. Occasionally it is found in the dead of winter, even when the snow is deep.

NEST.—A cup of grasses and slender weed-stalks, generally placed on the ground, rarely in a low bush, lined with finer materials, and usually located in the woodlands at the base of a small tree, under a May-apple plant, or in a bank. *Eggs*: 3 to 5, white, thickly, evenly, and finely spotted, and sometimes blotched with reddish brown, grayish, and black.

The Towhee's interesting habit of scratching among the leaves is characteristic and rather amusing. Like a little hen, the bird bustles about on the ground, jumping back and forth as the leaf-mold flies and as the small terrestrial insects and fallen weed-seeds are exposed. A Towhee thus hunting for food may make a laughably big noise.

Its flight is jerky, not usually rapid, and the tail pumps and flashes considerably, showing the white tips of the outer feathers plainly. None of our woodland birds more clearly displays white in



Towhee, Male

the tail than does this ground-inhabiting species, unless it is the smaller Junco.

Listen for the often-repeated, rather loud call-note of this bird, *too-whee*, as he elevates his crest and flicks his tail. The song is rather musical and resembles somewhat the following syllabification *prit-tel-lee, lee, lee, lee, lee*, the last part being run together so rapidly as to be scarcely pronounceable. The Towhee sings from the top of a bush of low tree and, while performing, lets his tail hang limp and lifts and throws back his head.

Young Towhees, carefully guarded by their voluble and agitated parents, are hard to find in their leafy home. They have heavily streaked underparts, and therefore look a good deal more like the race of sparrows, to which they belong, than do their parents.

CARDINAL

Richmondena cardinalis cardinalis (Linnæus)

OTHER NAMES.—Redbird; Virginia Cardinal or Redbird; Cardinal Grosbeak.

DESCRIPTION.—Smaller than Robin; both sexes with high crests and huge, pink bills. *Adult male*: Bright, deep rose-red, richest on breast; back, wing and tail-feathers edged with grayish; region in front of eye and on throat black; bill orange-pink; eyes brown. *Female*: Grayish brown above, buffy white and grayish below, the crest, wings, and tail tinged with red, noticeable especially in flight. *Young male*: Like the adult female, but the under-wing linings are pink and the breast is blotched with red. *Length*: 8 inches.

RANGE IN PENNSYLVANIA.—An abundant permanent resident in southern and western Pennsylvania, and locally in the mountains. It is extending its range northward along the river valleys.

NEST.—A neat but rather thin cup of weed-stalks and grasses, scantily lined with rootlets and other fine materials. *Eggs*: 3 or 4, white, spotted and speckled with lilac and grayish.

Both the male and female Cardinal sing a loud, whistling song which may be variously written as *poo-ree, poo-ree, reap-er, reap-er, whit you, whit you*, or *what cheer, what cheer*, many times repeated. The call-note is a metallic chirp. Cardinals are sometimes familiar door-yard birds. Since they stay the year around, a special effort should be made to feed them corn, suet, nuts, sunflower seeds, and grit during the snowy spells.

Cardinals like to nest in shadowy places, and will sometimes rear their young in shrubbery or vines which grow about our porches.



Cardinal, Male

ROSE-BREASTED GROSBEAK

Hedymeles ludoviciana (Linnæus)

DESCRIPTION.—Smaller than Robin, with very large beak. *Adult male*: Head, neck, and uppersparts black, the wings, tail, and upper tail-coverts marked with white; triangular breast-patch and under-wing linings light rose-red; rest of underparts white, streaked on sides with black; bill white or pinkish white; eyes dark brown. *Adult female*: Sparrow-like in appearance, being dull brown, streaked with black above, the wings marked with two whitish wing-bars, the underparts buffy, streaked with brown on breast and sides. *Young males*: Like the females but with rosy under-wing linings. *Adult male in winter*: Like adult female, but the wings and tail more or less as in the spring plumage and rosy breast-patch showing to an extent. *Length*: 8 inches.

RANGE IN PENNSYLVANIA.—A somewhat local and irregular migrant throughout, and a summer resident chiefly in the central and northern counties from late April to mid-September.

NEST.—A cup made of vegetable fibers and rootlets, often so thin that the eggs show through, placed in a thick tree, in a low, damp situation, 8 to 25 feet from ground. *Eggs*: 3 to 6, pale blue-green, spotted with brown.

The song of this bird is a bright, musical warble, resembling the carol of a Robin. Both sexes incubate the eggs, and the male may sometimes be heard singing softly or in a full-throated manner while at his domestic duties. These birds eat many destructive insect pests, including the much-dreaded Colorado potato beetle. The call-note may be written *eek*.



Rose-breasted Grosbeak
Male Female



INDIGO BUNTING

Passerina cyanea (Linnæus)

DESCRIPTION.—*Adult male in spring*: Bright, glossy green-blue all over, purplish on head, somewhat dusky on wings and tail, and the belly sometimes marked with a few whitish feathers; bill and eyes black. *Adult female*: Grayish brown, lighter below, the lesser coverts and edge of wing and tail-feathers bluish; two obscure grayish wing-bars. *Young birds*: Like the females. *Adult males in winter*: Similar to those in spring but all feathers tipped widely with brown, giving an effect much as in the female. *Length*: 5½ inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from late April or early May to mid-September; sometimes very abundant in favorable localities.

NEST.—A rather firm, deep cup made of weed-stalks and plant fibers, placed a few feet from the ground in a raspberry or other low bush, usually at the edge of a woodland or in an open space among the trees. *Eggs:* 3 to 5, very pale blue or bluish white.

In the very top of a tree, along the hot midsummer roadside, sings the brilliant male during the lazy noon hours, his bright, rich music an accompaniment to the damp warmth which rises from the fields or to the dust that settles on the leaves near the road. Approach the singer carefully or he will fly before you get a good glimpse of him. The female is not easy to recognize unless she happens to be with or near her mate. She is very dull in color and is not often seen. Raspberry and blackberry thickets are the favorite haunt of this bird.

The larger **Blue Grosbeak** (*Guiraca cærulea cærulea*) should be looked for in southern counties. Records for this rare species are very desirable.

The **Dickcissel** or **Black-throated Bunting** (*Spiza americana*) is a very local summer resident which should be looked for in open fields. It is English Sparrow-like in appearance, but has a yellow breast. Its song may be written *Dick, dick, chic, chic, chic.*

SCARLET TANAGER

Piranga olivacea (Gmelin)

DESCRIPTION.—Larger than the English Sparrow, with bill which is heavy like a sparrow's but longer and not so conical. *Adult male in summer:* Bright scarlet, our brightest red bird, with black wings and tail, pale olive-green bill, and dark brown eyes. *Adult female:* Olive-green above, dull yellow below. *Male in winter:* Olive-green, like the female, but with black wings and tail. Male birds in changing plumage, such as is found in late summer, are much blotched in appearance. *Length:* A little over 7 inches.



Scarlet Tanager, Male

and weed-stalks, placed from 20 to 40 feet from the ground, usually in a deciduous tree. *Eggs:* 3 to 6, pale blue-green, speckled with reddish brown.

The slow, crawling movements and lazy, rather harsh, warbling song of this bird strongly suggest the tropics, its ancestral home.

NEST.—A rather shallow, thinly constructed cup made of rootlets

and weed-stalks, placed from 20 to 40 feet from the ground, usually in a deciduous tree. *Eggs:* 3 to 6, pale blue-green, speckled with reddish brown.

Its song is much like a Robin's, but it is more alto and is harsher and lazier, and its call-note is a plainly given *chi-perr*, which is often more frequently heard in the damp woodlands than any other bird-note of midsummer. The intensity of the male Scarlet Tanager's full plumage fairly takes the breath. At a distance, the dull female may suggest a vireo or a large warbler, but her movements are always characteristic of this family.

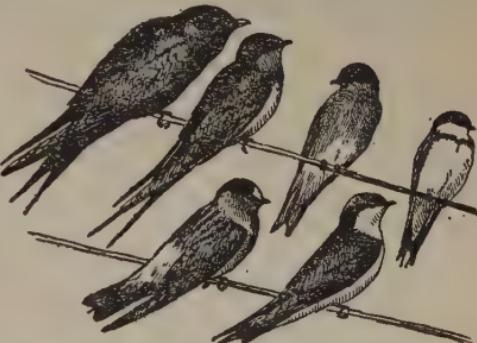
PURPLE MARTIN

Progne subis subis (Linnæus)

DESCRIPTION.—Larger than English Sparrow; wings long and pointed; tail moderately long and noticeably forked. *Adult male:* Rich purplish and bluish black, the lores velvety black; feet and bill black; eyes dark brown. *Adult female:* Blackish glossed with blue above; forehead, underparts, and imperfect collar around neck, gray; belly whitish. *Immature birds:* Like the adult female. *Length:* 8 inches.

RANGE IN PENNSYLVANIA.—A fairly common but extremely local migrant and summer resident from early or mid-April to mid-August and occasionally later.

NEST.—Made of leaves and grasses in a cavity in a tree, crevice in a building, or in a bird-house, from 12 to 40 feet from the ground. *Eggs:* 3 to 7, white.



Purple Martin; Barn, Rough-winged, Bank, Cliff, and Tree Swallows

Spluttering notes, some of which resemble an old-fashioned music-box, announce the return of the Martins to their accustomed nesting quarters. Gracefully, the glossy birds sail about, calling to each other, capturing insects, and perching near or upon their nest. They have almost altogether given up nesting in hollow trees and prefer to use bird-boxes, it appears, though in such towns as Waynesburg, Ligonier, and Coudersport they nest in any cranny among the buildings which they can find. Martins are very fond of dragonflies; they have the interesting habit of bringing green leaves into the nest during summer, either as new lining for the nests, to make the young birds cooler, or for some other reason. In late summer they band together, sometimes in tremendous flocks, depart for some congregating point along the New Jersey or Delaware coast, or elsewhere, and prepare for the journey to their South American winter home. Purple Martins are temperamental in choosing their nesting quarters. Certain towns do not please them, and they will not, apparently, nest; in other towns they nest anywhere.

CLIFF SWALLOW; EAVES SWALLOW

Petrochelidon albifrons albifrons (Rafinesque)

DESCRIPTION.—About the size of an English Sparrow, but with long wings; tail of moderate length, not noticeably forked; sexes similar. *Adults:* Forehead buffy white; crown and back glossy steel-blue, the latter obscurely streaked with white; cheeks, ear-patches, chin, and throat rich reddish brown; back of neck, narrow collar, and underparts grayish; belly white; wings and tail blackish, glossed with blue; *rump pale reddish or orange-brown*, very noticeable in flight. *Young:* Dull grayish brown, the rump noticeably rusty though not as plainly so as in adult. *Length:* 6 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant throughout and extremely local summer resident, chiefly in the northern counties, from early or mid-April to early or mid-September.

NEST.—A bottle-shaped structure of mud, lined with grasses and feathers, the funnel-shaped entrance to the nest pointed outward and downward. It is built under the eaves of a barn or other building, *always on the outside*, or on a cliff or bridge abutment. Usually many nests are found together. *Eggs:* 4 to 7, white, or creamy white, speckled with reddish brown.

Look for the buffy rump-patch of this slow-flying, graceful swallow, which gathers mud for its nest without alighting on the ground and whose conversational twitterings sound like the squeaks produced by rubbing a piece of wet rubber with the finger. In early spring and during later summer, several kinds of swallows will be found together in the migratory flocks. Cliff Swallows are easily driven from their nests by English Sparrows or Starlings; they will not use bird-boxes put out for them.

BARN SWALLOW

Hirundo rustica erythrogaster Boddaert

DESCRIPTION.—Smaller and slenderer, but longer than an English Sparrow, with long, pointed wings and very long, deeply forked tail which is noticeable in flight or while the bird is perched on a wire. *Adult male:* Forehead, chin, and throat rich reddish brown; line through eye and band across breast blackish; upperparts blackish, highly glossed with steel-blue, the inner margins of the tail-feathers marked with white spots; rest of underparts and wing-linings pale reddish brown. *Adult female:* Similar, but duller. *Young birds:* Almost white below and with only moderately long, though noticeably forked tails. *Length:* 7 inches.

RANGE IN PENNSYLVANIA.—An abundant migrant and summer resident from mid-April to late August or early September.

NEST.—A cup of mud, lined with feathers and a few grasses, built upon a rafter *on the inside of a barn* or other building, usually in a more or less inaccessible spot. *Eggs:* 3 to 7, white, spotted with brown.

Every farmer boy loves the cheerful swallows which twitter so amiably and circle so tirelessly about the barn, capturing insects above nearby pools and darting through the doors, or sometimes through mere cracks in the boards, so unerringly. These birds have good reason to be popular, for they are not only beautiful and

companionable neighbors, but they are distinctly beneficial because of their capturing of myriads of flying insects which they eat or feed to their ravenous young. I once saw a blacksnake at the nest of a Barn Swallow, high on an upper rafter in a barn-loft, and it had eaten two of the young before I interrupted its meal.

TREE SWALLOW; WHITE-BELLIED SWALLOW

Iridoprocne bicolor (Vieillot)

DESCRIPTION.—Smaller than an English Sparrow; tail of moderate length and not deeply forked. *Adult male:* Uppertails glossy blue-green, brightest on crown and back, less colorful on wings and tail; *entire underparts pure white.* *Female:* Similar, but duller. *Young birds:* Like the female. *Length: 6 inches.*

RANGE IN PENNSYLVANIA.—A fairly common migrant throughout, but a rather rare and local summer resident in northern counties and at high altitudes, from early April to late August. As a nesting bird, it is almost always found near a body of water.

NEST.—Of grasses and other vegetable matter, lined with feathers, placed in a cavity, an old woodpecker nest, or in a bird-box, usually from 15 to 60 feet from the ground, in a tree at the edge of a lake or in the water. *Eggs: 3 to 7, white.*

The swallows are easily distinguished once their outstanding characters are firmly fixed in the mind. This bird has white, *absolutely unmarked* underparts—the Bank Swallow's white breast is crossed with a brownish band; the Rough-wing's throat and breast are gray. I have seen Tree Swallows nesting at Conneaut Lake, Crawford County, and at several of the lakes in the mountains of northeastern Pennsylvania.

BANK SWALLOW

Riparia riparia riparia (Linnaeus)

OTHER NAME.—Sand Martin.

DESCRIPTION.—Smallest of the swallow family, considerably lighter and slenderer than an English Sparrow; sexes similar. *Adults:* Grayish brown above; wings and tail noticeably darker than back in flight; underparts white; breast crossed by a narrow, dull brown band, distinctly noticeable when the bird is at rest; tail not deeply forked. *Length:* About $5\frac{1}{4}$ inches.

RANGE IN PENNSYLVANIA.—Formerly found at several points during summer where it does not nest now, due to pollution of the streams. It is a fairly common migrant and local summer resident from mid-April to early or mid-September.

NEST.—Of grasses and rootlets, lined with feathers, placed at the end of a long burrow which is usually several feet above high-water-mark and sometimes 5 to 6 feet long. *Eggs: 3 to 6, white or creamy white.*

This little swallow usually nests in large colonies. It has a graceful, fluttering flight, much less direct and rapid than that of the somewhat larger, though amazingly similar, Rough-winged Swallow,

which occurs in many parts of Pennsylvania where the Bank Swallow does not nest. In identifying this species, take care to observe closely the brown band across the breast and the light brown back which contrasts with the blacker wings and tail.

ROUGH-WINGED SWALLOW

Stelgidopteryx serripennis serripennis (Audubon)

DESCRIPTION.—About the size of a Barn Swallow; outer web of outer primary with tiny recurved hooks along the entire edge, noticeable when the thumb or finger-nail is drawn along it; these hooklets are sometimes absent in the female; the purpose they serve is not known. *Adults:* Above brownish gray, quite dark on wings and tail; throat and breast pale brownish gray; belly white. *Immature:* Similar, but the outer web of the outer primary has no hooklets and the gray of the throat and breast is sometimes washed with reddish brown. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A rather rare, somewhat local, and never abundant summer resident from April 15 to September 1, found almost altogether in the more southern and less mountainous counties.

NEST.—Of grasses and weed-stalks, lined with finer materials, *but not with feathers*, placed at the end of a burrow in a bank, as is the Bank Swallow's, or in crevices in rocks along a stream, in abutments of bridges, or sometimes in pipes about dwellings which stand near streams. *Eggs:* 3 to 6, white.

The Rough-wing's graceful, sweeping flight is less fluttering than that of the Bank Swallow. All of the swallows usually allow fairly close approach and therefore should not be difficult to identify.

CEDAR WAXWING

Bombycilla cedrorum Vieillot

OTHER NAMES.—Cherry Bird; Cedar Bird.

DESCRIPTION.—Plumage soft and silken; feet rather short and small; head with high crest; bill small. *Adult male:* Head, neck, breast, and back, glossy olive-brown; forehead and line through eye, chin, and throat, black; a white line extending backward from lower mandible to beneath eye; black forehead bordered behind with white; wings, rump, and tail, blue-gray; secondaries tipped with small waxen appendages; *tail prominently tipped with pale yellow*; sides and belly sulphur-yellow; under tail-coverts whitish; bill, feet, and eyes, black. *Female:* Similar, but usually lacks the waxen appendages on the secondaries. *Young birds:* Similar, but with only a small crest and noticeably streaked. Waxen appendages sometimes occur on the secondaries of the female as well as on the tips of the tail-feathers in both sexes. *Length:* A little over 7 inches.



Cedar Waxwing

RANGE IN PENNSYLVANIA.—An erratic and irregular permanent resident, being sometimes abundant, sometimes absent for several seasons; usually seen in flocks.

NEST.—Neatly built of weed-stems, twigs, and fibers, lined with softer materials, placed in a tree, usually from 12 to 20 feet from the ground, and toward the end of the branch. Nesting often takes place rather late in summer. I have seen a female sitting upon her eggs as late as September 11. **Eggs:** 3 to 6, blue-gray, spotted with black.

The Cedar Waxwing's trim form and sleek plumage make him an outstandingly handsome bird. He has no song, however, giving forth only a fine, shrill *eeeeeee*, which is scarcely audible to some observers. A flock of these plump-bodied birds sometimes sit in a tree-top, their feathers fluffed out. They catch insects like fly-catchers. Sometimes they indulge in a queer little dance. In a cherry tree which is full of fruit, they sometimes pass tid-bits between them in a strangely deliberate, polite fashion. They are very fond of cedar berries, poke berries, and the fruits of the Virginia creeper, but the name "Cherry Bird" is well earned. Remember the crest, the upright carriage, the flocking tendency, and the *yellow-tipped tail* of this species. The waxwings are the only birds which have their tails tipped with yellow.

The Northern or Bohemian Waxwing (*Bombycilla garrula*) is to be found rarely in winter. Records of this species in Pennsylvania are very desirable. It is like the Cedar Waxwing in color, but is larger; the under tail-coverts are rich reddish brown, and the wings are marked with a white patch on the primary coverts, white tips on the secondaries, and white and yellow edgings on the primaries. When Bohemian Waxwings appear they are likely to be docile and unsuspicious, and will therefore give the observer an excellent opportunity to identify them satisfactorily.

NORTHERN SHRIKE *Lanius borealis* Vieillot

OTHER NAME.—Butcher Bird.

DESCRIPTION.—Size of Robin, but with larger head and large, strongly hooked bill; sexes similar. **Adults:** Top of head, hind neck, and back, light gray, lightest along outer edges of scapulars and fading into white on rump and upper tail-coverts; line above eye, white; broad line through eye to ear-coverts, wings and tail, black; tips of the secondaries, base of the primaries, and tips of outer tail-feathers, white; underparts finely barred with light gray; bill, feet, and eyes, black. **Young birds:** Brownish gray, with dark brown wings and tail which are marked with white much as in the adults. The underparts are finely barred with brownish. **Length:** 10½ inches.



Northern Shrike

RANGE IN PENNSYLVANIA.—Rather rare winter visitant from late October or November to March. It is found chiefly in the northern counties in more or less open regions.

The shrike's striking black and white plumage will suggest a Mockingbird. Its harsh cries have a sinister quality, however, suggesting a bird of prey. The heavy, hooked bill and strong feet assist it in capturing the mice, small birds, and insects which are its food, and which it impales on thorns or on barbed wire. Records of this species are desirable.

MIGRANT SHRIKE

Lanius ludovicianus migrans W. Palmer

OTHER NAME.—Butcher Bird.

DESCRIPTION.—Smaller than Robin, with proportionally large head and strongly hooked bill; sexes similar. Top of head, hind neck, and back, clear gray, shading into whitish at outer edges of scapulars and on rump and upper tail-coverts; wings and tail black; tips of secondaries, base of primaries, and tips of outer tail-feathers, white; broad band through eye back to ear-coverts, black; underparts white, grayer on breast and belly, *which are not barred*.

RANGE IN PENNSYLVANIA.—A rather rare and local migrant and summer resident from early March to November, nesting chiefly in the Lake Erie coastal region and elsewhere in flat, open country.

NEST.—A bulky affair made of twigs, lined with feathers, placed in a thorn tree not far from the ground. *Eggs:* 3 to 6, white, spotted with gray or olive-gray.

When a shrike moves from one perch to another, it drops to within a few inches of the ground and moves along with characteristic buzzing flight, at which times its gray, black, and white plumage is conspicuous. In the field its head appears large, and it is given to perching in prominent barren places, on the top of a tree or on a wire.

THE VIREOS

The Vireos are a difficult group for the beginner. They are dull in color, they come at a time when other birds are abundant, and they do not, for the most part, have particularly noticeable songs. In identifying the Vireos it is well to remember that *all of them move deliberately*, turning the head from side to side pensively, and crawling about the branches in a very characteristic fashion. No Vireo has any white in the tail, as have many of the otherwise similarly colored warblers. Note that the first three species have no wing-bars; the other three have two wing-bars.



Migrant Shrike

RED-EYED VIREO

Vireosylva olivacea (Linnaeus)

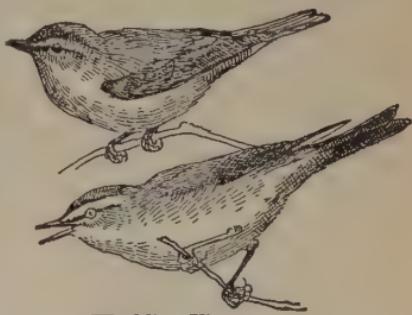
OTHER NAME.—Preacher Bird.

DESCRIPTION.—Size of English Sparrow. *Adults*: Top of head blue-gray; line above eye white, bordered above with a blackish line; line through eye blackish; rest of upperparts olive-green; underparts whitish, washed with olive-green and pale yellowish on sides; eyes reddish or red-brown. *Young*: Similar, but duller. *Length*: 6½ inches.

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident from late April or early May to late September and October.

NEST.—A pensile cup made of vegetable fibers, cobwebs, and so forth, *lined with grape-vine bark*, placed on a branch of a low sapling, usually from 5 to 10 feet from the ground. *Eggs*: 3 or 4, white, with a few dark brown spots.

The oft-repeated song of this bird, which is delivered all during the warm hours of the summer days, has been responsible for the name "Preacher Bird." This song, given while the bird searches for food among the leaves, is repeated at intervals of a few seconds, sometimes apparently for hours at a stretch. Look for the Red-eye in shady woodlands where there are deciduous trees. The harsh note of alarm is not unlike the well-known cry of the Catbird.



Warbling Vireo
Red-eyed Vireo

PHILADELPHIA VIREO

Vireosylva philadelphica Cassin

DESCRIPTION.—Like the Red-eyed Vireo, but smaller, with slightly shorter bill, greener upperparts, and rather decidedly yellower underparts.

RANGE IN PENNSYLVANIA.—A rather rare and little-known migrant in late April and early May and in September, found usually in alder thickets in the company of various species of the warbler family.

This species is not easy to identify in the field. Its song, which is like the Red-eye's, but more rapidly delivered, may be heard in the spring; but in the fall, the chances are the bird will pass unnoticed since neither its song nor its color in any way attracts attention. All records are desirable.

WARBLING VIREO

Vireosylva gilva gilva (Vieillot)

DESCRIPTION.—Like the Red-eye, but smaller, less strikingly marked, the top of head being almost the same color as the back, the sides less tinged with yellow. *Length*: 5¾ inches.

RANGE IN PENNSYLVANIA.—A common summer resident from late April to late September; usually found in or near towns.

NEST.—A pensile cup, made much like the Red-eye's, but found high in shade trees, in towns, or along country roadsides. *Eggs:* 3 or 4, white, with a few small spots.

Dull, plain in appearance, this is one of our most perfectly named birds, for its song is a *warble*—a somewhat unmusical, wheezy, lisping warble, usually delivered from the shade of a big tree.

YELLOW-THROATED VIREO

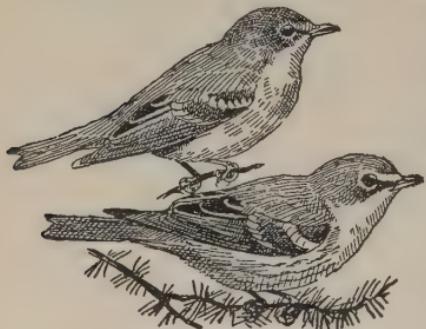
Lanivireo flavifrons (Vieillot)

DESCRIPTION.—About the size of the Red-eye, but with line in front of and around the eye, and chin, throat, and breast, clear light yellow; two prominent white wing-bars, and the blackish tertials strongly edged with white. The sexes are similar. *Length:* 6 inches.

RANGE IN PENNSYLVANIA.—Fairly common but somewhat irregular summer resident from late April and May to September.

NEST.—A deep, pensile cup, swung from a branch high in a large deciduous tree standing at the edge of a woodland or in an open field. *Eggs:* 3 or 4, buffy white, with a few red-brown spots.

The song of this species, which is deliberate, and alto in quality, has been written *Mary, Mary, come 'ere*, the 'ere with a downward inflection.



Yellow-throated Vireo
Blue-headed Vireo

WHITE-EYED VIREO

Vireo griseus griseus (Boddaert)

DESCRIPTION.—Smaller than the Red-eye and with a more sprightly manner. Line above and around eye yellow; wing with two yellowish or white bars; sides yellowish; breast and belly grayish; chin and throat white; eyes white, rather noticeable in the field. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—An extremely rare migrant in the western part; east of the mountains somewhat commoner, particularly along the Susquehanna and Delaware drainage, where it sometimes nests.

NEST.—A neat, pensile cup, placed in a low bush or tree, usually not far from the ground. *Eggs:* 3 or 4, white, with a few dark brown spots.

The song which may be written *pit, pit-a-ta-chee-wheer*, does not suggest a vireo at all. Remember that this bird will be found among low, thick bushes.

BLUE-HEADED VIREO

Lanivireo solitarius solitarius (Wilson)

DESCRIPTION.—Size of the Red-eye, but upper part of head rich blue-gray, with a prominent line in front of and around eye, white; wings with two noticeable bars; sides yellow, irregularly washed with olive-green; chin, throat, breast, and belly, white. *Length:* A little over 5½ inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant and summer resident. It is the first of the vireos to arrive in spring, appearing in mid- or latter April and remaining until October. It nests only at high altitudes in the mountains or in the northern counties.

NEST.—A neat and beautifully built pensile cup, swung on a horizontal hemlock, witch hazel, or alder bough, usually deep in the woodlands. *Eggs:* 3 or 4, white, with a few small black spots.

The song of this handsome vireo is rich and beautiful—easily the most musical of all our vireo songs. It is to be heard chiefly in the depths of the coniferous woodlands. Unusually elaborate and prolonged songs are sometimes given in the spring. Remember the prominent *white eye-ring* of this species.

BLACK AND WHITE WARBLER

Mniotilla varia (Linnæus)

OTHER NAMES.—Black and White Creeper; Black and White Creeping Warbler.

DESCRIPTION.—Black and white all over, the colors about evenly balanced, giving the bird in the field a streaked appearance, noticeable particularly in the male. Since no other warbler is thus streaked with black and white *all over*, it is thought that this description is sufficient. *Females and young:* Duller, the young with buffy washings on sides. *Length:* $5\frac{1}{3}$ inches.

RANGE IN PENNSYLVANIA.—A migrant and summer resident from late April and early May to September. It is rather local as a summer resident though it may occur in any suitable woodland.

NEST.—A cup of rootlets and fine grasses placed on the ground at the base of a sapling or a fallen bough or log, usually in rather open woodland. *Eggs:* 4 or 5, white, with a neat wreath of fine red-brown spots about the larger end.



Black and White Warbler

This bird is nearly always seen creeping about the trunks and larger branches of trees, and its boldly streaked plumage is unmistakable. Its song, which has been written *wee-see, wee-see, wee-see, wee-see*, is wiry and unmusical, and the untrained ear will probably not catch it. Look for this bird in any woodland, particularly where there are deciduous trees.

The southern Prothonotary Warbler (*Protonotaria citrea*) is rarely recorded in the southern counties. This species has blue-gray wings and tail, *no wing-bars*, and the head and breast are rich orange-yellow. Records are desirable.

The Yellow-throated Warbler (*Dendroica dominica dominica*) is a long-billed species which looks a good deal like a Black and White Warbler with a yellow throat; it occurs in the southernmost counties. It may be found as a nesting bird.

WORM-EATING WARBLER

Helmitheros vermivorus (Gmelin)

DESCRIPTION.—Crown and superciliary buffy brown; prominent black streak at either side of crown; black streak through the eye; underparts buffy, the centers of the under tail-coverts darker; upperparts olive-green, much as in a vireo. *Female and young:* Similar but duller. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—In southern and particularly southwestern Pennsylvania this species is a fairly common summer resident from early May to mid-September. It is found chiefly in deciduous woodlands along streams. It is rare in central and northern counties.

NEST.—A neatly built cup of rootlets, hair, and vegetable fiber, placed on the ground, usually at the base of a sapling. *Eggs:* 4 or 5, white, finely speckled with reddish brown.



Worm-eating Warbler

The song of this comparatively little-known species is very much like that of a Chipping Sparrow. If you hear a Chipping Sparrow in the woods, you had better look for the bird; you may make a startling discovery, since Chipping Sparrows are rarely found away from human dwellings in Pennsylvania.

The Worm-eating Warbler is nearly always found near the ground, and it is usually necessary to keep quiet so as to let the bird approach if you wish to have a good look at it.

BLUE-WINGED WARBLER

Vermivora pinus (Linnæus)

OTHER NAME.—Blue-winged Yellow Warbler.

DESCRIPTION.—*Adult male:* Front of head, breast, and belly bright, clear yellow; sharp black line through eye; back of head and back olive-green; wings and tail blue-gray, the wings with two noticeable white bands; the tail with white spots at tips of inner webs of outer feathers. *Female:* Much duller, the whole top of the head being greenish, as a rule. *Length:* 4¾ inches.

Blue-winged Warbler
Golden-winged Warbler

RANGE IN PENNSYLVANIA.—A decidedly local summer resident from early May until mid-September, to be found in all but the mountainous counties.

NEST.—A cup made of leaves, lined with fine grasses, placed at the base of a weed or a little bush, usually in a low meadow or at the edge of an alder swamp. *Eggs:* 3 to 5, white, spotted with reddish brown, chiefly at the larger end.

The characteristic song of this bird may be written *zwee-chee*, the former syllable with an inhalant, the latter an exhalant quality. Later in the summer other songs are given which combine this song with

many *chips*. Look for the Blue-wing near the ground in a swampy situation, among alders, or willows. In the fall it sometimes occurs in the higher woodlands along with other migrating species.

GOLDEN-WINGED WARBLER

Vermivora chrysoptera (Linnaeus)

DESCRIPTION.—*Male:* Top of head yellow; line through eye, and chin and throat, black; an area from lower mandible back to neck, white; back of head, neck, wings, and tail, gray; wing, with lesser and most of greater coverts, pale yellow; outer feathers of tail with white spots on inner webs; breast and belly white, the sides washed with grayish. *Female:* Similar, but duller, the black of the head being replaced with gray. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—A rather uncommon and local summer resident from early May to September, found in low meadows or in bushy edges of woodlands.

NEST.—Of leaves, lined with finer materials and often somewhat arched over with leaves, placed at the base of a bush. *Eggs:* 4 or 5, white, speckled with brown.

The song may be written *see, zee, zee, zee*.

The Brewster's and Lawrence's Warblers, hybrid forms which result from the interbreeding of the Blue-winged and Golden-winged Warblers, sometimes occur in Pennsylvania. The typical Brewster's Warbler has the white underparts and yellow-marked wings of the Golden-wing. The breast and belly of Lawrence's Warblers are yellow, and there are two prominent white wing-bars as in the Blue-wing.

NASHVILLE WARBLER

Vermivora ruficapilla ruficapilla (Wilson)

DESCRIPTION.—*Adult male:* Upper part of head blue-gray, with a partly concealed rufous crown-patch and noticeable white eye-ring; chin, throat, breast, and belly clear, strong yellow; upperparts olive-green, without markings in wings or tail. *Female:* Duller. *Immature:* Almost unmarked, the eye-ring being buffy and not noticeable, the sides being washed with buffy. *Length:* 4½ inches.

RANGE IN PENNSYLVANIA.—A regular and often abundant migrant in May and September; rare and very local as a summer resident in northern counties and at high altitudes.

NEST.—On the ground, near a log or at the base of a sapling. *Eggs:* 4 or 5, white, speckled with red-brown.

The song is a series of *chips*, introduced by the syllables *wee-see, wee-see, wee-see*.



Nashville Warbler
Orange-crowned Warbler

ORANGE-CROWNED WARBLER

Vermivora celata celata (Say)

DESCRIPTION.—Olive-green above; crown with more or less concealed dull orange patch, not easily seen in the field; underparts and obscure ring about eye dull yellow; sides irregularly streaked with olive-green; sexes similar. *Young birds:* Duller. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—The Orange-crown is one of our little-known warblers which may be considerably commoner than we suppose. It occurs as a migrant in May and September, and is to be found chiefly in swampy situations, principally among alders.

The song, which is not often heard in Pennsylvania, according to my experience, is considerably like that of a Nashville or Tennessee Warbler, being a series of *chips*, but the tempo is different. All such songs should be thoroughly investigated to make certain some rare bird is not passed by. (See illustration, page 131.)

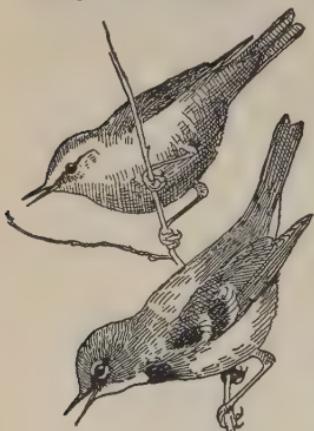
TENNESSEE WARBLER

Vermivora peregrina (Wilson)

DESCRIPTION.—*Adult male:* Crown clear gray; prominent white superciliary; line through eye black; underparts white, washed along sides with faint yellow; upperparts olive-green; wings unmarked; outer tail-feathers marked with white along the inner margin. *Female:* Similar, but crown tinged with greenish. *Immature:* Olive-green above, brightest on rump; dull yellowish below, brightest on the under tail-coverts. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—A migrant in May and September, apparently fairly regular and common in spring among the mountains, rare east of the mountains, but equally abundant everywhere in the fall.

The song of this bird is a series of *chips*, the tempo of which changes twice, the most rapid part of the song coming at the last. This bird is like a vireo in color but not in actions. Young birds are sometimes exceedingly common in the fall.



Tennessee Warbler
Parula Warbler

PARULA WARBLER; BLUE YELLOW-BACKED WARBLER

Compsothlypis americana pusilla (Wilson)

DESCRIPTION.—*Adult male:* Head, all but chin and throat, blue-gray, extending down to upper back, scapulars, wings, and tail; back dull yellow; wings with two prominent white wing-bars; outer tail-feathers with white along inner vanes; chin, throat, and lower breast clear yellow, a dusky band across upper breast which is bordered below with reddish brown; belly, sides, and under tail-coverts white. There is an almost complete, but not par-

ticularly noticeable, white eye-ring. *Female*: Similar, but less brightly colored; breast usually without much trace of the dusky and reddish brown band. *Young birds*: Similar to the female. *Length*: 4½ inches.

RANGE IN PENNSYLVANIA.—Common as a migrant during May and September; rather local as a summer resident, having been known to nest at several points in the State.

NEST.—Generally built of and among tree moss, in a conifer or other tree, usually from 20 to 40 feet from the ground. *Eggs*: 4 or 5, white, speckled with brown at the larger end.

The thin, squeaky song of this species is not noticeable. It might be written *pit see, pit see, pit see see*. A thin, insect-like, ascending trill is also occasionally given; this trill resembles one of the songs of the Redstart.

CAPE MAY WARBLER

Dendroica tigrina (Gmelin)

DESCRIPTION.—*Adult male*: Crown black, the feathers tipped with gray toward the back of the head; patch about eye, including ear-coverts, rich orange-brown; fore part of superciliary, chin and throat, sides of neck, breast, sides and rump, clear yellow; lower throat, breast, and sides strikingly streaked with black; wing with two wing-bars which are so broad that they merge, forming a white patch; outer tail-feathers with white spots on inner vanes at tip. *Female*: Much duller, the brown of the side of the head being replaced with olive-green, the yellow of rump and underparts dull, sometimes hardly noticeable, the wing-bars narrow and obscure. *Young birds*: Like their parents, but duller, the white wing-patch in the young male usually being evident. *Length*: 5 inches.

RANGE IN PENNSYLVANIA.—A migrant, rare, as a rule, in the spring, when it is seen during May. It is often abundant in the fall, from early September through October, and sometimes later.

This very handsome warbler can hardly be called a songster. The song is thin and squeaky, sometimes like the shrill squeaking of a large insect—*see, see, see, see, see*, it might be written, the syllables becoming louder toward the end. Usually the song is given from a rather high perch. The heavily streaked breast is a pretty good field-mark for any age or plumage of this bird.

YELLOW WARBLER

Dendroica aestiva aestiva (Gmelin)

OTHER NAMES.—Summer Yellow Bird; Wild Canary (erroneous).

DESCRIPTION.—*Adult male*: Head and underparts bright yellow, the breast, sides, and belly streaked with reddish brown; back, wings, and tail



Yellow Warbler
Cape May Warbler

dull yellowish green, brightest on rump, and obscurely streaked; wing with two yellow wing-bars, and the inner webs of all the tail-feathers but the central pair, yellow, showing plainly in flight. *Female:* Similar, but much duller, the underparts almost altogether without streaks. *Length:* A little over 5 inches.

RANGE IN PENNSYLVANIA.—An abundant migrant and summer resident from late April and early May to early September.

NEST.—A neat, usually deep cup, made of vegetable fiber lined with wool, feathers, and soft materials, held in place with a few horsehairs. *Eggs:* 3 to 5, white or bluish white, spotted with gray, chiefly about the larger end.

The Yellow Warbler's fondness for lilac bushes and other shrubbery about our yards leads him to be a favorite and familiar bird. His bright though unmusical song is almost incessant during the days of early spring, when much time is spent, prior to building the nest, in chasing about, sparring with rival males, or in courting. During these pursuits the yellow inner vanes of the tail-feathers are likely to be plainly seen.

BLACK-THROATED BLUE WARBLER

Dendroica cærulescens cærulescens (Gmelin)

DESCRIPTION.—*Male:* Upperparts dark gray-blue, lightest on forehead and crown; face, throat, upper breast, and sides solid black; belly and under tail-coverts white; base of primaries with a white spot, rather obscure in some individuals; tips of inner vanes of outer tail-feathers white. *Female:* Dull

greenish gray above, pale buffy gray below, with *white spot at the base of the primaries* which is always characteristic of this species in any plumage. The female has an obscure whitish line above the eye. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A common migrant in May and September. Found as a summer resident in the northern and more mountainous counties where it occurs almost wherever there is a rhododendron growth.

NEST.—A neat but rather shallow cup, usually placed in rhododendron 2 to 3 feet from the ground, often in the deepest part of the woodland. *Eggs:* 3 or 4, white or creamy white, spotted about larger end with reddish brown.

The song of this species is deliberate and rich, though droning and insect-like rather than musical. It might be written *zuree, zuree, zuree, zeee, or zwee, zwee, zwee, zwee.*

The colors of the male are unmistakable, but the dull-colored female and young will puzzle many a beginner. Remember the white patch at the base of the primaries. Look for the bird in midsummer, in rhododendron thickets.



Myrtle Warbler
Black-throated Blue Warbler

MYRTLE WARBLER; YELLOW-RUMPED WARBLER*Dendroica coronata coronata* (Linnæus)

DESCRIPTION.—*Adult male in spring:* Crown-patch, patches at sides of chest, and rump, clear yellow; white line above eye; rest of upperparts blue-gray; back streaked with black; wings with two white wing-bars; outer tail-feathers tipped with white on the inner webs; chin and throat white; sides of breast black, merging into streaks along the sides; belly and under tail-coverts white. *Adult female:* Similar, but browner, and the black breast-patches replaced with streaks. *Immature and adults in winter:* Brownish, the yellow patches on crown, sides of chest, and rump, obscure. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A common migrant in late April and May and September and October; occasional as a winter resident; it has been noted thus principally at Erie.

The Myrtle Warbler is usually not shy and may be identified easily. In its winter range it spends much of its time on or near the ground, where it eats many seeds. While with us it is usually seen in the lower trees and bushes, where a good view may be obtained of the upperparts with the bright yellow rump-patch. The song is not noticeable; it does not have any particularly accented notes, and will not be of much use in identifying the bird. Myrtle Warblers are to be found in any sort of woodland; they have no preference for coniferous trees during migration, though they nest in them in Canada.

MAGNOLIA WARBLER*Dendroica magnolia* (Wilson)

DESCRIPTION.—*Adult male:* Crown blue-gray; line above eye and spot under eye, white; area in front of and behind eye, black; back, wings, and tail blackish; wing with large white patch; tail with the bases of the inner webs of all but the inner pair of feathers white; rump and underparts yellow, breast and sides heavily streaked with black; under tail-coverts white. *Adult female:* Similar, but duller, the underparts less heavily streaked. *Immature:* Dull olive-greenish above, without noticeable superciliary or spot under eye, but with two wing-bars and markings on the tail same as in adult; underparts yellow, obscurely streaked along the sides with black; under tail-coverts white. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—As a migrant abundant in May and September, particularly the latter, when hordes of young birds are migrating. As a summer resident rather rare and local, found principally among or near hemlock growth, chiefly in the northern and more mountainous counties.

NEST.—A shallow, neat cup, made of fine twigs, lined with finer materials and hair, placed a few feet from the ground, often in a hemlock sapling. **Eggs:** 3 or 4, white or creamy, with red-brown spots at larger end.

This very active warbler may be “squeaked up” easily. As it dashes about, the white band at the base of the tail usually shows plainly, for it spreads its tail widely at times. The song is a brief unmusical effort which ends with a chopped-off falling inflection. (See illustration, page 136.)

CERULEAN WARBLER

Dendroica cerulea (Wilson)

DESCRIPTION.—*Adult male*: Light gray-blue above, with a distinct white line over the eye, two prominent white wing bars, and obscure black streaking on the back; inner webs of outer tail-feathers tipped with white; underparts white, a band of gray or gray-blue usually completely encircling the breast; sides streaked with black. *Female*: Glossy green-blue on the head, dull grayish green on the rest of the upperparts, the wings and tail marked much as in the male; underparts dull yellowish white. *Length*: 4½ inches.

RANGE IN PENNSYLVANIA.—An abundant summer resident from early May to mid-September, locally, in the southwestern counties; elsewhere it is rare and irregular.

NEST.—A shallow, neat cup of lichens, vegetable fiber, and tree-flowers, saddled on a horizontal limb from 20 to 50 feet from the ground, often in a beech tree. *Eggs*: 3 or 4, white, spotted with grayish, especially at larger end.

The song of this handsome bird may be written *cheery, cheery, cheery, chee*. It is rather rapidly given, with a rising inflection at the end. The Cerulean Warbler

usually stays high in the trees.

CHESTNUT-SIDED WARBLER

Dendroica pensylvanica (Linnæus)

DESCRIPTION.—*Adult male*: Crown pale yellow; line through eye black; back greenish or yellowish white, strikingly streaked with black; wings with two white wing-bars; inner webs of outer tail-feathers tipped with white; underparts white or grayish white, the sides marked with a broad streak of chestnut very noticeable in the field. *Female*: Similar, but duller, the chestnut of the sides being almost obsolete at times, the top of the head streaked. Immature birds are not easy to identify; they are plain yellowish green above and whitish below; the eye is encircled with a whitish ring, which is quite noticeable, and the wings are marked with two prominent wing-bars. *Length*: A little over 5 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant during May and September; as a summer resident, local and sometimes abundant in the northerly and more mountainous counties. It is to be looked for anywhere in the State as a nesting bird—wherever there are thicket-covered hillsides.

NEST.—A rather well-made cup which is sometimes semi-pensile, placed 2 to 3 feet from the ground in a low bush or in a blackberry vine. It is composed of weed-stalks, vegetable fibers, and other soft materials. *Eggs*: 3 or 4, white, wreathed about the larger end with fine chestnut-brown spots.

It has been said that the bright, varied song of this bird ends with the syllables *Miss Beecher*. It is not amiss to bear in mind such a



Magnolia Warbler
Cerulean Warbler

characterization, for though the bird never gives such syllables distinctly, when the song is once learned the name will always jump to mind the minute it is heard. Look for these active birds in thickets on hillsides.

BAY-BREASTED WARBLER

Dendroica castanea (Wilson)

DESCRIPTION.—*Adult male:* Mask across forehead and face, including the ear-coverts and entirely surrounding the eyes, blackish brown; prominent round patch on side of neck, buffy white; back of head, chin, throat, upper breast, and sides, rich reddish brown; back grayish, streaked with black, the wings with two prominent white wing-bars, the inner webs of the outer tail-feathers white at tips; lower breast, belly, and under tail-coverts white or creamy white. *Adult female:* Has but little suggestion of the reddish brown on head, breast, or sides, and the black of the face appears in a few streaks; two prominent wing-bars and the suggestion of reddish color on the sides are characteristic. *Young birds:* Obscure, being olive-green above, dull yellowish below, and, as a rule, having a trace of reddish brown; two prominent wing-bars; face and breast of a decidedly yellowish tone. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A migrant, common in the spring during May, sometimes staying quite late, and abundant in the fall, the young fairly swarming through the trees in September and early October.

The buffy white patches on the sides of the neck of the adult male are excellent field-marks, and gleam like beacons when the red-brown cannot be distinguished. Young birds may easily be confused with immature Black-poll Warblers, however, and also look a little like vireos. The young Bay-breast is a yellower bird than the young Black-poll, however, and is somewhat more deliberate.

The song is a thin, wiry warble which does not lend itself readily to syllabization. Look for these birds in woodlands not far from streams, in spring. In autumn the young are to be found almost anywhere, even in the towns, and they are frequently to be seen searching for insects among rank weeds or low bushes.



Bay-breasted Warbler
Chestnut-sided Warbler

BLACK-POLL WARBLER

Dendroica striata (J. R. Forster)

DESCRIPTION.—*Adult male:* Crown black; sides of head below eye, white, showing plainly in the field; black line from lower mandible to side of breast; neck, back, and wings greenish gray, streaked with black, the wings with

two white bars, the tail with the inner webs of the outer feathers white; underparts white; sides of neck and breast and the sides heavily streaked with black. *Adult female:* Lacks the black crown and white facial patch, is dull olive-green all over, yellowish on the breast, is noticeably streaked with

black, even over top of head, and has two noticeable wing-bars. *Immature:* Plain olive-green above, obscurely streaked; dull yellowish below, with an indefinite line above eye and two prominent wing-bars. If specimens have been taken, the young Black-poll may be distinguished from the young Bay-breast by its yellowish rather than dusky feet. This mark may sometimes be seen in the field, since the birds are unsuspicious and may easily be observed. *Length:* $5\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A migrant, fairly common *in late spring*, from about the middle of May on for three weeks; in the fall abundant, particularly the young birds, which during latter September may outnumber all other species combined.

The droll, unmusical song of the spring Black-poll will escape all but the sharpest ears.

Ee, ee, ee, eee, eee, eeee, it seems to be, the latter syllables becoming louder. The first song I ever heard I listened to for a quarter of an hour before I could locate the singer among the leafy tops of some high elms. Once caught within the range of the binoculars, his colors were unmistakable, but it seemed scarcely possible that the slight, ventriloquistic song could be coming from him.

Remember that this bird comes late in spring. Its head pattern, at a distance, is somewhat like that of the Chickadee.

BLACKBURNIAN WARBLER

Dendroica fusca (Müller)

DESCRIPTION.—*Adult male:* Above black; center of forehead, line above eye, patch on side of neck, and spot under eye, bright orange-yellow; back with two lateral streaks of yellow; wings with two wide white wing-bars which so merge as to form a patch which extends into the white edging of the tertials; tail-feathers edged with whitish, particularly at the base, and inner webs of outer tail-feathers tipped with white; chin, throat, and breast, bright, rich orange, fading into yellowish on belly, and to whitish on under tail-coverts; breast heavily streaked with black. *Female:* Similar, but duller, the black of the upperparts being replaced with grayish. Young birds resemble the female but are less conspicuously marked, the breast usually being dull buffy yellow without any trace of orange, the wings marked with two white bars, not with a white patch. *Length:* $5\frac{1}{4}$ inches.

RANGE IN PENNSYLVANIA.—A common migrant throughout, noticeable in mid-spring. As a nesting bird, found only in the higher and more northern counties, and usually among conifers, where in midsummer the birds are so infrequently seen that their presence is often unknown.



Black-poll Warbler
Blackburnian Warbler

NEST.—A neat cup made of fine twigs, lined with finer materials. *Eggs:* 3 or 4, creamy white, wreathed about larger end or speckled all over finely with brown. The nest is usually placed high in a hemlock.

The color scheme of this gem among warblers is much the same as that of the Baltimore Oriole, and a full-plumaged male among the spring blossoms of an apple tree is a sight which can hardly be rivaled for sheer color and delicacy. The song is a disappointing, wiry lisp, usually delivered from the top of the tree, and so slight and unmusical as to pass unnoticed as a rule.

If you expect to see this bird in its summer home, you will have to look up a great deal into the tops of the hemlocks.

BLACK-THROATED GREEN WARBLER

Dendroica virens virens (Gmelin)

DESCRIPTION.—*Adult male:* Top of head and line through eye, olive-green; sides of head clear yellow; chin, throat, and upper breast, black; back, wings, and tail, olive-green, back streaked obscurely with black; wings with two white wing-bars; outer tail-feathers with white on inner webs; belly and sides white, washed with yellowish, the sides streaked with black. *Female and young:* Similar, but duller, having very little black on the throat, and being somewhat more yellowish on belly. *Length:* A little over 5 inches.

RANGE IN PENNSYLVANIA.—As a migrant abundant during May and September; as a summer resident found in the more northern and mountainous counties where there is hemlock growth.

NEST.—A deep, neat cup, made of fine hemlock twigs and lined with finer materials, including fur, saddled on a hemlock bough from 5 to 30 feet from the ground. *Eggs:* 4 or 5, white, speckled with brown about the larger end.

In the hemlock shade, during summer, sounds the plaintive and musical song of this bird, which may be diagrammed thus, *dee dee dee dee, dēe dēe*. This bird is to be looked for anywhere in sturdy hemlock growth; during migration it may be seen near the ground in lower growth; during the summer, however, males often sing from favorite perches high in the trees.

PINE WARBLER

Dendroica pinus pinus (Wilson)

DESCRIPTION.—*Adult male:* Olive-green above, with yellow superciliary not clearly defined; two prominent white wing-bars and the tips of the inner webs of the outer tail-feathers white; underparts dull yellow; an obscure



Black-throated Green Warbler
Pine Warbler

line of olive-green from lower mandible leading back to side of chest where streaking of sides begins. *Female*: Similar but a little duller. *Length*: 5½ inches.

RANGE IN PENNSYLVANIA.—A summer resident rather locally distributed; found chiefly in the southern and central mountainous counties and more or less restricted as a nesting bird to areas in which pine trees grow. Sometimes arrives very early in spring.

NEST.—A cup made of twigs and fine weed-stalks, lined with finer material, placed near the tip of a pine bough, often at great height. *Eggs*: 3 or 4, white, spotted with brown.

The Pine Warbler's rather dull coloration and resemblance to other species of the family would make it a difficult bird to identify were it not that it is *virtually always found among pine trees*. Its bright chipping song, which resembles that of the Chipping Sparrow a good deal, is delivered from the tip of a pine bough, and at such times the yellow breast and white wing-bars are evident. At Mont Alto, Franklin County, and in certain sections of Huntingdon County, I have found this bird abundant.

PALM WARBLER AND YELLOW PALM WARBLER

Dendroica palmarum palmarum (Gmelin)
and

Dendroica palmarum hypochrysea Ridgway

Two forms of the Palm Warbler occur in Pennsylvania, both as migrants. They are usually seen near the ground and are especially noticeable in the spring when they appear among the first of the smaller birds.

DESCRIPTION.—*Adult male Palm Warbler*: Crown rufous; rest of upper-parts dull olive-green, brightest on rump; wings with two white wing-bars; outer tail-feathers marked with white; dusky line through eye; distinct yellow line above eye; chin, throat, and breast dull yellow, streaked with olive-green; belly and under tail-coverts whitish. *Female and young*: Similar, but duller.

The Yellow Palm Warbler is much brighter, though similar in general appearance. The entire underparts are yellow, *including the under tail-coverts*, and the breast and sides are streaked with reddish brown.

RANGE IN PENNSYLVANIA.—The Palm Warbler occurs as an early spring and mid-fall migrant in western Pennsylvania, west of the mountains. The Yellow Palm Warbler occurs in the eastern portion of the Commonwealth. At Harrisburg, the Yellow Palm Warbler occurs among the earliest spring migrants.

The Palm Warblers both have the habit of wagging their tails. They are



Palm Warbler
Prairie Warbler

often seen near the ground, or in low bushes, and are usually not difficult to observe. Their songs are a broken series of *chips*, given in a rather subdued voice.

PRAIRIE WARBLER

Dendroica discolor (Vieillot)

DESCRIPTION.—*Adult male*: Upperparts olive green, back with patch of rufous brown; wing-bars yellowish; outer tail-feathers with white patches at tips; line over eye, face, and underparts yellow; lores and line under eye black; sides heavily streaked with black. *Adult female*: Similar, but duller, the back sometimes without reddish brown. *Immature*: Much duller than adults. *Length*: 4½ inches.

RANGE IN PENNSYLVANIA.—A common migrant east of the Alleghany Mountains in late April and May and in September; it has been known to nest in Lancaster County.

NEST.—A compact cup of plant fibers and down, lined with hairs, fibers, and rootlets, placed low in bushes. *Eggs*: 4 or 5, white, spotted with brown, chiefly in a wreath at larger end.

The Prairie Warbler is to be looked for in old pastures, or brush-covered hillsides, or in low pine or cedar growth. It is rather retiring in disposition. Its song is a series of *zees* rapidly repeated. In summer this species is decidedly local in distribution.

OVENBIRD

Seiurus aurocapillus aurocapillus (Linnæus)

DESCRIPTION.—*Adult male*: Crown-patch orange-brown, bordered on either side by a black stripe; rest of upperparts dull olive-green; a rather prominent white eye-ring; underparts white, washed with buffy along sides, and heavily streaked on breast and sides with black. *Female and young*: Similar but duller. *Length*: A little over 6 inches.

RANGE IN PENNSYLVANIA.—An abundant migrant and summer resident from early April to November; found in open woodlands.

NEST.—A neat cup of leaves, grasses, and weed-stalks, arched over the top with the same materials, in the shape of an old-fashioned oven.

Beneath the ferns and the low bushes a small bird walks daintily among the leaves, jerking its tail a little as it pauses to search for food. As it turns, we glimpse the eye-ring and its heavily streaked underparts. In a moment it puts back its head and sings *teecher, tee cher, tee cher, tee cher*, the notes becoming louder toward the end. Occasionally the Ovenbird sings a flight-song, a brilliant repetition of its usual song, embellished with additional notes and phrases, and enlivened by enthusiasm.



Ovenbird

NORTHERN WATER-THRUSH

Seiurus noveboracensis noveboracensis (Gmelin)

DESCRIPTION.—Upperparts, including wings and tail, olive, without wing-bars or marks on tail; line over eye, buffy or yellowish; underparts whitish, tinged with pale yellow; throat, breast, sides, and belly streaked with black. The sexes are alike and young birds are like adults; in fall, the underparts are more yellowish than in spring. *Length:* 6 inches.



Northern Water-Thrush

RANGE IN PENNSYLVANIA.—A rather regular and fairly common migrant throughout, from latter April to mid-May, and during the first half of September; summer resident in the northerly counties and at high altitudes.

NEST.—Built among the roots of a fallen tree in a damp forest, or in a wooded swamp, lined with fine grasses, rootlets, and moss. *Eggs:* 4 or 5, white, spotted with brown, chiefly at larger end.

The Water-Thrushes wag their tails in a characteristic fashion as they walk among the ferns and mosses, or seek their food at the edge of a woodland pool or thickly up-grown stream. They are not particularly shy, and may sometimes be "squeaked up" very close. Their song is loud, bright, and clearly patterned, and has been ably written *hurry, hurry, hurry, pretty, pretty, pretty*. It is usually not to be found along swift, shallow woodland streams, but seems to prefer more quiet, even stagnant, water.

LOUISIANA WATER-THRUSH

Seiurus motacilla (Vieillot)

DESCRIPTION.—Like the Northern Water-Thrush, but a little larger, the line over the eye whiter and more conspicuous, the *underparts white*, tinged with buffy, not with yellow, and streaked with blackish on the breast and sides, *not on the throat or belly*. *Length:* 6½ inches.

RANGE IN PENNSYLVANIA.—Fairly common but local summer resident in central and southern Pennsylvania.

NEST.—Built along the bank of a stream, sometimes not far from the water's edge, of leaves, lined with grasses and rootlets. There is often a neat pavement of leaves in front of and below the nest. *Eggs:* 4 to 6, white, spotted and flecked all over with brown.

The Louisiana Water-Thrush's home is the wooded ravine, where a swift stream speeds down its rocky bed amid fallen trunks and mossy ledges. Here the shy birds dash about with swift, erratic flight, walk among the mosses, teetering as they go, or singing their remarkably loud, ringing song when they are not disturbed. The song is louder, more ringing, and less abrupt in closing than is that of the Northern Water-Thrush.

KENTUCKY WARBLER

Oporornis formosus (Wilson)

DESCRIPTION.—*Male:* Crown and area below eye and on side of throat, black, crown-feathers tipped with gray; line from bill, which extends over and back of eye, yellow; rest of upperparts olive-green; wings and tail unmarked; underparts bright, clear yellow. *Female:* Similar, but duller, the black areas inclined to be grayish and not clearly defined. *Length:* About 5½ inches.

RANGE IN PENNSYLVANIA.—A fairly common summer resident in southeastern and southwestern counties from about May 1 to September 5. It is a bird of the Carolinian faunal zone, which is probably gradually extending its range northward.

NEST.—On or near the ground, rather bulky, and made of leaves and roots, lined with rootlets and other fine materials. *Eggs:* 4 or 5, white, rather evenly spotted or speckled with brown. Nests of this species are often difficult to find.

In southwestern Pennsylvania, where I first became acquainted with the species, the Kentucky Warbler lives in damp, dense woodlands, usually in ravines. Its song is a strikingly smooth and sweet-voiced, rolling *tootle, tootle, tootle, tootle*, which has a penetrating quality. In singing, the males often sit upon the lower branches of the great trees; they search for their food chiefly on the ground. The black area on the face and the bold yellow line about the eye are striking field-marks.



Kentucky Warbler

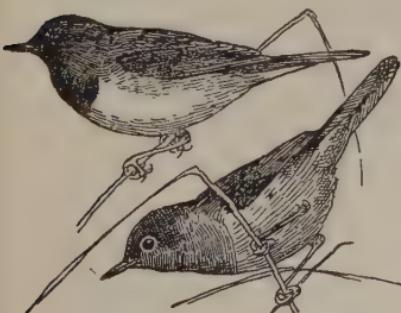
CONNECTICUT WARBLER

Oporornis agilis (Wilson)

DESCRIPTION.—*Adult male:* Head, neck, and breast, ashy gray, with prominent white eye-ring; rest of upperparts olive-green; wings and tail unmarked; underparts yellow; sides washed with olive-green. *Female and young:* Similar to adult male, but uniform olive-green above, the lighter eye-ring not noticeable, the throat and breast light brownish gray. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A migrant, very rare in spring, during latter May, and somewhat commoner from latter August to about the end of September.

This rare bird does not often sing in Pennsylvania. Look for it among high weed-growth in fall and among undergrowth in damp woods.

Mourning Warbler
Connecticut Warbler

MOURNING WARBLER

Oporornis philadelphicus (Wilson)

DESCRIPTION.—*Adult male:* Much like the Connecticut Warbler, but without eye-ring, and throat blackish, *blending into a fan-shaped black area on breast*. *Female and young:* Similar, but with upperparts olive-green, slightly grayer on head, and throat and breast gray, lightest on throat. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A rather uncommon migrant during May and from mid-August to the end of September. As a summer resident it occurs only in the northern and higher counties.

NEST.—A rather bulky structure, among weeds, on or near the ground, made of grasses, plant-fiber, and old leaves, lined with hair or fern rootlets. *Eggs:* 3 or 4, white, spotted with brown at larger end.

Look for this beautiful warbler in dense weed-growth or in brush along lowland streams. It is not particularly shy, but is very difficult to see because it slips away so easily among the shadows. The song, which is not heard in the fall, as a rule, has been written *trú ee, trú ee, trú ee, trú, too*. The voice rises on the first three parts of the song, and falls on the last two.

MARYLAND YELLOW-THROAT

Geothlypis trichas trichas (Linnæus)

DESCRIPTION.—*Adult male:* A mask of black across forehead; cheeks and ear-coverts bordered behind by gray; rest of upperparts olive-green, unmarked; throat and breast bright yellow, fading to white on belly and brownish on sides; under tail-coverts yellow. *Female:* Similar, but without the black mask, the forehead sometimes tinged with reddish brown.

Adult males in the fall: Browner above and on sides. *Immature males:* Black facial mask obscured by grayish edgings. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from late April to about the end of September.

NEST.—On or near the ground, of grasses, leaves, and bark strips, lined with finer materials, in a swamp or low meadow. *Eggs:* 3 to 5, white, sparsely speckled with brown, often chiefly at the larger end.

This warbler is so common that it should be known by all. Look for it along up-grown streams where weeds are thick and deep, or along the margins of marshes. The song has been written *witchity, witchity, witchity*, but this is sometimes varied considerably. The call-note is a harsh, rather loud *tschack*. The facial mask of the male is to be confused with no bird other than the rather rare Kentucky Warbler which is to be found *on wooded hillsides*, not in deep weeds along streams and pools. The Yellow-throat gives a flight-song, and also has a Red Squirrel-like, long-drawn-out series of chips, not often heard. If you make it a point to visit a marshy spot in late summer or early fall, you will almost certainly see these birds in the deep weeds, sedges, or cat-tails.



Maryland
Yellow-throat

YELLOW-BREASTED CHAT

Icteria virens virens (Linnæus)

DESCRIPTION.—Larger than an English Sparrow; the largest of our warbler tribe. *Adults:* Upperparts olive-green, grayer on crown; wings and tail unmarked; line from bill over and around eye, and line on side of throat, white; throat and breast rich yellow; sides grayish; belly and under tail-coverts white. Young birds in first flight plumage are much streaked. *Length:* $7\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—A decidedly local summer resident from May 1 to mid-September—common in some sections, absent in others, usually found in central and southern counties.

NEST.—A bulky, well-built structure made of weed-stalks, grasses, and leaves, neatly and deeply cupped, placed in a small bush or bramble thicket a short distance from the ground. *Eggs:* 3 to 6, white, evenly speckled with brown.

The Chat has his own ideas about singing. He fluffs out his feathers, mounts a tree above the brush-covered hillside where his nest is hidden, and begins an odd performance. He clucks, he squeals, then repeats several times a loud, deep whistle. Perhaps, in his enthusiasm, he flies upward, to somersault back to the leaves in reckless fashion. He spreads the feathers of his dandelion-yellow throat and twirls his head as he sings. It seems that surely he will lose some of his feathers while he flops about.

You cannot intrude upon his concert. He hears the snap of a twig, the song ceases, and perhaps you will catch only a glimpse of the olive-green back.

The nests, which are large enough to be noticeable, are sometimes very poorly hidden, and may be found by looking through the interlaced branches of low bushes or thickets.



Yellow-breasted Chat

HOODED WARBLER

Wilsonia citrina (Boddaert)

DESCRIPTION.—*Adult male:* Forehead and sides of head rich yellow; crown, hind neck, and throat black; rest of upperparts olive-green; outer tail-feathers white on their inner webs; rest of underparts bright yellow. *Young male:* Similar, but the black feathers of head tipped with yellow. *Adult female:* Like adult male, but duller, the black of the head largely replaced by gray. *Length:* A little over $5\frac{1}{2}$ inches.

RANGE IN PENNSYLVANIA.—Fairly common summer resident in central and southern counties from about May 1 to mid-September.

NEST.—A neat, deeply cupped structure of grasses, fibers, rootlets, and

cobwebs, placed from 3 to 15 feet from the ground in a slender sapling or on a small branch of a larger tree. *Eggs:* 4 or 5, white, thinly wreathed with brown about the larger end.



Hooded Warbler
Canadian Warbler

The flashing white inner webs of the outer tail-feathers of this species are an excellent field-mark. Wherever the bird is found, it is easily observed, though it is very active. Its song I have written as *too-wit, too-wit, too-wee-oh*, given in a sprightly manner. Look for it in luxuriant, young tree-growth on partially shaded hillsides. In the fall Hooded Warblers may be silent, but they usually flash their tails as they become excited over our presence. The somewhat similarly colored Wilson's Warbler has no black on the throat.

WILSON'S WARBLER

Wilsonia pusilla pusilla (Wilson)

OTHER NAMES.—Black-capped Warbler; Wilson's Black-cap.

DESCRIPTION.—*Male:* Forehead and underparts bright yellow; crown glossy black; upperparts olive-green; wings and tail unmarked. *Female and young:* Similar, but duller, the female with only a suggestion of the black cap, the young altogether without it. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant from May 10 to June 10 and from early to latter September. It appears to me to be less common in spring than in fall.

The jaunty Wilson's Warbler, with his odd, unmusical, chipping song, has the habit of tilting or jerking his tail and flirting his wings in a very characteristic manner. Look for him in vines or low trees. He is in color a warbler, but in insect-pursuing tactics a flycatcher. As he tumbles after a gnat, his wide bill snaps audibly.



Wilson's Warbler
Redstart

CANADIAN WARBLER

Wilsonia canadensis (Linnæus)

DESCRIPTION.—*Adult male:* Upperparts gray, darkest on crown; line from bill to eye, and underparts, yellow; marks on sides of neck black, and a necklace of black spots across breast; under tail-coverts white. *Female:*

Similar, but duller, with no black on head, and only a suggestion of the black necklace. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant in May and September, found chiefly in low, bushy growth. As a summer resident, found only in more northerly and mountainous counties, usually in damp woodlands.

NEST.—Of leaves, lined with rootlets and other fine materials, placed at the base of a tree or in a bank. *Eggs:* 4 or 5, white spotted with brown.

The nervous, sprightly song of this little-seen bird ends with a decisive, upward *tsip*. If you can catch a glimpse of the singer you will see that his song is a fair representation of the bird, for he is energetic, nervous, and erratic in his movements. He is adept as a flycatcher. (For illustration, see page 146.)

REDBREAST

Setophaga ruticilla (Linnæus)

DESCRIPTION.—*Adult male:* Glossy blue-black, with basal half of the wing-feathers and basal two-thirds of tail-feathers orange-pink, the sides of breast and flanks bright rosy orange, and the belly white. *Adult female:* Grayish above, white below; wings, tail, and sides of breast with the same pattern as male, but marked with yellow, not orange-pink. *Young males:* Like the females, but more or less mottled with black. During the young male's first breeding season he looks much like the female; with the succeeding moult he assumes the plumage of the full adult. *Length:* 5½ inches.

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident from early May to October, commoner in summer in more northerly and mountainous counties.

NEST.—A deep, firm, neat cup of fibers, cobwebs, and bark, saddled into the large crotch of a sapling from 5 to 20 feet from the ground. *Eggs:* 3 to 5, white, speckled with gray or brown, chiefly at larger end.

Here is a bird well worth finding. It is common and confiding, but its gorgeous plumage never fails to produce a gasp of amazement. As though the Redstart felt the need of making the most of his beautiful attire, he spreads his wings and tail, flashing them as he bustles about the twigs, fans them widely as he tumbles after an insect, and pauses in the sunshine a moment between his foraging expeditions. Even the female spreads her yellow-marked wings.

The song is not musical; it is wheezy and wiry, and not easily syllabized. It often ends with a decisive downward note.

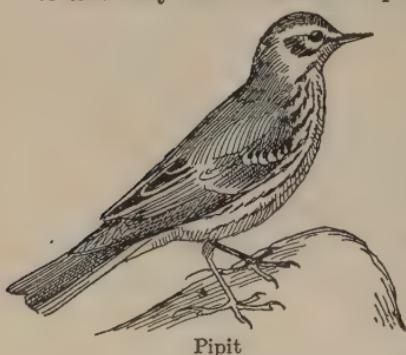
Look for the Redstart in open woodlands.

PIPET; TITLARK

Anthus spinoletta rubescens (Tunstall)

DESCRIPTION.—A little larger than an English Sparrow. Grayish brown above, the edge of outer tail-feathers white; a buffy line over the eye; underparts buffy; breast and sides streaked with dark brown. If the bird be in the hand, the hind toe-nail, which is very long, will be noted. *Length:* 6½ inches.

RANGE IN PENNSYLVANIA.—A rather irregular migrant from early April to mid-May and from late September to late October, sometimes fairly common, and often occurring in flocks; occasional in mild winters.



Pipit

Here is a bird utterly unknown to the average citizen of Pennsylvania. It lives in the open fields or on bald hill-tops. The Pipit walks daintily, after the manner of a Horned Lark, and if frightened springs into the air, to bound away, uttering its simple call-note, *tsit-tsit, tsit-tsit*, as it disappears high in air. It almost constantly moves its tail in a wagging

manner. The white-edged outer feathers should be noted.

MOCKINGBIRD

Mimus polyglottos polyglottos (Linnæus)

DESCRIPTION.—Length of Robin, but slenderer. Light gray above, with whitish line above eye; wings and tail dark brown-gray, the primaries basally white, the outer tail-feathers white; underparts grayish white; eye pale yellow. Length: 10½ inches.

RANGE IN PENNSYLVANIA.—Rare and irregular in the southernmost counties, where it may occur at any time of the year. It occasionally nests.

NEST.—Bulky, of twigs, lined with rootlets, placed in a bush or low tree. Eggs: 4 to 6, pale green-blue, spotted and blotched all over with brown.

The Mocker's song is world-famous. It is a remarkable medley of bird-songs, varied with a few original whistles and cries. While singing, this bird often leaps into the air, to tumble back to his perch with loosely flashing wings and tail. He sometimes sings for hours at night. While rare in Pennsylvania, he seems to be extending his range gradually northward.



Mockingbird

CATBIRD

Dumetella carolinensis (Linnæus)

DESCRIPTION.—Smaller than Robin; slate gray with blackish crown, tail and wings, and rich red-brown under tail-coverts. Length: Almost 9 inches.

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident from late April to early October, especially common in more cultivated districts; usually rare in wilder woodlands.

NEST.—A large, bulky structure of twigs, lined with rootlets or grape-vine bark. *Eggs:* 3 to 5, deep blue-green, glossy. Nests are placed in thickets or bushy trees, from 3 to 15 feet from the ground.

The Catbird's colors, call-notes, and manners are easily remembered. He is plainly attired; his cat-like call is familiar; and his jaunty appearance in yard or orchard is instantly recognizable. His song, while varied and pleasing in spots, is interspersed with squeaks and chuckles which are not musical. As he sings, his tail droops, but when he is bustling about on every-day business he is given to changing his attitude with the passing instants—now he is fluffy, now sleek; up goes his tail; he jumps; he flashes his wings, droops them and spreads his tail. It takes many an insect and berry to keep so active an organism alive.



Catbird

BROWN THRASHER

Toxostoma rufa rufa (Linnæus)

OTHER NAME.—Brown Thrush (erroneous).

DESCRIPTION.—Size of Robin, with longer tail. Rich, bright red-brown above, the wing-bars whitish, and a rather noticeably buffy line above eye; underparts whitish, heavily streaked with black, save on throat and middle of belly; eyes yellow. *Length:* 11½ inches.

RANGE IN PENNSYLVANIA.—An abundant migrant and summer resident from mid-April to mid-October.

NEST.—Large and strong, of twigs, lined with rootlets and strips of weed-stalks, usually placed in a bush a few feet from the ground. *Eggs:* 3 to 6, whitish, thickly and finely peppered with brown and gray.

The Brown Thrasher, with its short wings and long, brown tail, is a big relative of the wrens and is *not a thrush*. He lives in brushy pastures, where his rich, varied song, wherein all phrases are repeated twice as the music progresses,

is given from a high bough. Disturb him in his thicket home and he scolds with a harsh *chuck*, coming close to peer with his startlingly golden eyes. Rightly has this bird been called the "Mocker of the North," for its song is a succession of excellent imitations of many bird-songs, together with a few which are of the Thrasher's own invention.



Brown Thrasher

CAROLINA WREN

Thryothorus ludovicianus ludovicianus (Latham)

OTHER NAME.—Teakettle Bird.

DESCRIPTION.—Smaller than English Sparrow, but largest of our wrens. Rich red-brown above; prominent whitish or buffy line above eye; concealed white spots on rump; wings and tail barred with blackish; underparts buffy, lightest on throat, sometimes somewhat barred on flanks and under tail-coverts. Length: 5½ inches.

RANGE IN PENNSYLVANIA.—A local permanent resident in the southernmost counties; its range is apparently gradually extending northward.

NEST.—Large, loosely made, of leaves, twigs, weed-stalks, and débris, often almost completely domed over and neatly cupped, placed in a shed or in a crevice in an old log or tree-trunk. Eggs: 4 to 6, white, rather heavily spotted with reddish brown.

The song of this big wren has given it the common name, "Teakettle Bird." It is not so friendly as the House Wren, and often prefers the woodlands along streams to the towns. Yet I have known it to nest in nooks in sheds and barns, and even in boxes which had been piled at the edge of a dump-heap.



Carolina Wren
Bewick's Wren

BEWICK'S WREN

Thryomanes bewickii bewickii (Audubon)

DESCRIPTION.—Dark gray-brown above, with whitish line over eye; wings and tail barred with black; outer tail-feathers broadly tipped with gray; underparts grayish; flanks brownish. Length: 5 inches.

RANGE IN PENNSYLVANIA.—A rare, irregular, and local summer resident in southern, central, and southwestern counties, where it occurs in sections in which the House Wren is not found, from early April to October, and perhaps occasionally in winter.

NEST.—Built under or about buildings, often near the ground, of leaves, grasses, weed-stalks, and similar materials, lined with finer materials. Eggs: 4 to 6, white, thinly spotted and often wreathed with reddish brown.

This little-known bird is all too rare. It likes the dwellings of man and in some localities is a familiar bird.

HOUSE WREN

Troglodytes aëdon aëdon Vieillot

OTHER NAME.—Jenny Wren.

DESCRIPTION.—Smaller than English Sparrow; tail usually held erect. Brownish gray, brightest on rump and tail, the wings and tail finely barred

with black; underparts grayish; sides, flanks, and under tail-coverts barred with blackish. *Length:* 5 inches.

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident from mid-April to latter September; commonest near the habitations of man, as a rule.

NEST.—A bulky mass of twigs, lined with feathers, generally filling the cavity in tree, bird-box, or crevice where the structure is placed. *Eggs:* 5 to 9, pinkish white, finely spotted and wreathed with reddish brown. Nests are often built in very odd situations, such as the pockets of overalls which have been hung in old sheds.

The House Wren is destined to be popular because he nests in bird-boxes, even though they be poorly constructed and improperly placed. So intent is he upon rearing a brood that he builds in almost any sort of crevice, and so fond of gathering and hoarding twigs is he that he fills cavities just for amusement. Such a "fake" nest, which I examined, held three nails, two hairpins, a safety-pin, a dozen matches (which were partly burned), and innumerable twigs!

His marital customs, which have just been brought to light of day, are to be talked of in lowered voice. Apparently there is no such thing as a faithful husband, or wife, for that matter, among the House Wren tribe. Mother or father may leave at any time and consequences will take care of themselves.

Hue and cry about the House Wren's habit of puncturing the eggs of the other birds in the neighborhood seem not to be greatly affecting this sturdy, interesting little creature's popularity.

WINTER WREN

Nannus troglodytes hiemalis (Vieillot)

DESCRIPTION.—A chubby, small wren, with ludicrously short tail. Upperparts deep brown, barred on wings and tail with black; buffy line over eye; underparts buffy, barred and speckled with black, whitish, and brown. *Length:* 4 inches.

RANGE IN PENNSYLVANIA.—A fairly common migrant from early April to mid-May and from mid-September to October 20 or later; a summer resident in the mountainous counties; occasional in winter.

NEST.—Of moss and plant-down, finely built, placed on or near the ground in a tree-trunk or mossy bank. *Eggs:* 5 to 7, white, thinly peppered with brown.

The remarkably long and rippling song of this diminutive bird will arouse interest and wonder at once. Catch sight of the mouse-like performer, and he may dive for the underbrush. The alarm-cry is a double-syllabled harsh note which resembles the throaty *chup*



House Wren
Winter Wren

of a Song Sparrow. In migration, the Winter Wren will be seen about the roots of trees or along little streams; in summer, look for him in deep hemlock forests.

SHORT-BILLED MARSH WREN

Cistothorus stellaris (Naumann)

DESCRIPTION.—Small, even for a wren. Upperparts *brownish buffy*, streaked with black and white; wings and tail barred; underparts white; under tail-coverts, flanks, and zone about breast, *buffy brown*. *Length:* 4 inches.

RANGE IN PENNSYLVANIA.—A rare and local migrant and summer resident from early May to October.

NEST.—Spherical, of grasses, built on or near ground among grasses in marshy situations, the entrance to one side. *Eggs:* 5 to 8, white.

I have seen this bird in only a few places in Pennsylvania. It is to be looked for in grassy marshes, but does not seem to like cat-tails, preferring coarse, rank grass which grows in water or on damp ground. The song, as I heard it, sounded like *dick, putt, jik, plick, tick, tick, tick*. These wrens may be fairly common in a certain locality, but unless they are singing or are literally *kicked* from the grass, they will not be seen. All records are desirable.

LONG-BILLED MARSH WREN

Telmatodytes palustris palustris (Wilson)

DESCRIPTION.—Crown brown, bordered on sides with black; white line over eye; middle of back *black streaked with white*, rest of back brown; wings and tail barred with black; underparts white; sides reddish brown. *Length:* About 5 inches.

RANGE IN PENNSYLVANIA.—A migrant and summer resident in suitably marshy situations from latter April to early October. It is very local in occurrence.

NEST.—A globular, strongly built structure of grasses and cat-tail leaves, made while the materials are damp, and placed among weeds or rushes a few feet from ground or water; the entrance is on the side. *Eggs:* 5 to 9, dark brown, or light brown, heavily and finely spotted with darker brown.

To find these wrens, wade out into the very heart of the marsh. Here the clackety songs of the nervous creatures announce to us that we are near the nest. We find three or four of these, but discover no eggs. Patient hunting finally reveals a set of eggs after we have located perhaps a dozen "dummy" nests.



Long-billed Marsh Wren
Short-billed Marsh Wren

BROWN CREEPER

Certhia familiaris americana Bonaparte

DESCRIPTION.—Climbs a tree-trunk like a woodpecker; smaller than an English Sparrow; bill curved like a wren's. Plumage brown above, considerably streaked and otherwise marked with white, grayish, and darker brown; underparts grayish white; tail-feathers pointed and somewhat barred. *Length:* 4½ inches.

RANGE IN PENNSYLVANIA.—A common migrant in March and April and in September and October; occasional, sometimes common, in winter; a summer resident only at high altitudes or in northern counties.

NEST.—Of bark-strips, fibers, plant-down, and the like, placed under loose or curled bark, at from 6 to 20 feet from the ground, usually in a dense, low, woodland or wooded swamp. *Eggs:* 4 to 7, white, spotted with brown.

The Brown Creeper's fine, lisping call is not always heard, even by the keenest ear. Its song is a delicate, warbler-like bit which I have syllabized as *dee-dee, diddily, de-dwee*. This bird begins his trunk-searching at the base of the tree; he ascends spirally, searching carefully as he jerks along and when he gets to the upper branches, he dives to the base of the next tree, to begin his ascent again.



Brown Creeper

WHITE-BREASTED NUTHATCH

Sitta carolinensis cookei Oberholser

DESCRIPTION.—Size of English Sparrow, but with long, pointed bill, short tail, and short, strong feet. *Adult male:* Crown glossy blue-black; rest of upperparts blue-gray; outer tail-feathers blackish, tipped with black and white; wings with indistinct bars, and the tertials marked with black spots; sides of head and underparts white; under tail-coverts mottled with reddish brown. *Female:* Similar, but top of head grayish, not black. *Length:* 6 inches.

RANGE IN PENNSYLVANIA.—A common, permanent resident throughout.

NEST.—Of hair, mosses, feathers, and shredded bark, placed in a cavity at from 15 to 60 feet from the ground, usually in a forest tree. *Eggs:* 5 to 9, white, spotted evenly and thickly with reddish brown.

The Nuthatch's habit of perching and hopping, upside down, on tree-trunks is unmistakable. Actually, he seems to prefer to eat his food thus, making it proper to say, perhaps, that *he eats his caterpillars*

Red-breasted Nuthatch
White-breasted Nuthatch

up. He may realize that the creepers, woodpeckers, and Black and White Warblers, working upward as they do, find the insects which can be seen from below or from the side, while he prefers to investigate the crannies that these other birds may pass by.

This neighborly winter bird visits the food-counter regularly and is very fond of suet. He has the habit of hiding food in the bark of trees. I once saw a Nuthatch thus hoarding sunflower seeds. At least a full hour he worked, hiding dozens of the little kernels. He was watched and followed by a pair of lazy Downy Woodpeckers who deliberately ate the seeds as fast as the Nuthatch could hide them. The Nuthatch, it appeared, has great faith in his ability to hide food where it cannot be found—so great a faith, in fact, that he did not properly guard his store.

He calls *drrr, drrr, drrr* in a nasal voice, as he busies himself with pounding at a bit of food. As he looks out from the trunk his neck is bent from his body at even more than a right angle, yet he does not seem to tire of these strained attitudes.

RED-BREASTED NUTHATCH

Sitta canadensis Linnæus

DESCRIPTION.—Smaller than English Sparrow. **Male:** Crown and wide line through eye to back of head, glossy black; line over eye white; rest of upperparts bluish gray, the outer tail-feathers blackish with white spots near their tips; underparts pale reddish buff, save on throat which is whitish. **Female:** Similar, but duller, the black of the head replaced with gray. **Length:** 4½ inches.

RANGE IN PENNSYLVANIA.—A migrant in late April and May, and more or less throughout the fall; occasional in winter, sometimes abundant. Nests rarely in northern counties and at high altitudes.

NEST.—Of mosses, hair, and such soft materials, in a cavity, often in a conifer. **Eggs:** 4 to 7, white, speckled with brown and gray.

The Red-breasted Nuthatch's mouselike body seems strangely small as it moves about the great trunk of a high hemlock, far from the ground. As it disappears behind the tree, we hear its querulous, complaining *nă, nă, nă*, as it searches for insects. During migration it is often to be seen about the outer twigs where it sometimes hangs upside down, like a Chickadee. On the tree-trunks its actions are much the same as those of its larger relative, the White-breasted Nuthatch. (See illustration, page 153.)

TUFTED TITMOUSE

Bæolophus bicolor (Linnæus)

DESCRIPTION.—Size of English Sparrow; with prominent crest. Upperparts gray, forehead dark brown, a light spot in front of and above eye; underparts grayish white, the sides washed with reddish brown. **Length:** 6 inches.

RANGE IN PENNSYLVANIA.—A common permanent resident in southern and middle counties, gradually extending its range northward.

NEST.—Mass of leaves, mosses, hair, and feathers, placed in a cavity, at from 10 to 30 feet from the ground. **Eggs:** 5 to 8, white, spotted and blotched with reddish brown.

A small gray bird with a noticeable crest is likely to be the Tufted Tit. He is fond of the lower branches and is almost never seen perching on a tree-top, where the Cedar Waxwing, another crested species, prefers to watch for passing insects.

The song, which is a musical whistle, may be written *wheedle, wheedle, wheedle*. He has other call-notes which resemble those of the Chickadee. In his nest he gives a snake-like hiss.

Like the Chickadee, the Tufted Tit is an acrobat. He pounds away at a rolled leaf, or at a beechnut, hanging upside down on a slender twig. He may carry food about with him in his feet, but nesting material is gathered with the bill.



Tufted Titmouse
Black-capped Chickadee

BLACK-CAPPED CHICKADEE

Penthestes atricapillus atricapillus (Linnæus)

DESCRIPTION.—Smaller than English Sparrow. Top of head and throat black; cheeks white; rest of upperparts grayish; underparts grayish white, washed with brownish on sides. **Length:** 5 inches.

RANGE IN PENNSYLVANIA.—A common permanent resident, usually more numerous about towns in winter than in summer.

NEST.—Of fur, plant-down, and feathers, couched in moss and bark strips, placed in a cavity in a tree, usually from 5 to 15 feet from the ground. The birds often dig their own nest-cavity. **Eggs:** 5 to 9, white, spotted with brown, often chiefly at larger end.

The friendly, jolly Chickadee is one of our most popular birds. He calls his name plainly, and his color-pattern is distinctive. In spring he has a plaintive love-call which sounds like *phee-bee*. An imitation of this whistle often brings the bird very close.

In winter, Chickadees may visit the lunch-counter daily; but in summer, when the duties of family-rearing are pressing, they may not be seen for weeks at a time. For this reason they are frequently considered as winter birds.

In late summer and autumn the family groups wander about among the trees, searching for caterpillars and insect eggs, and calling sociably to one another.

The Carolina Chickadee (*Penthestes carolinensis carolinensis*), a slightly smaller species, with almost precisely the same coloration as the Black-capped Chickadee, is to be found locally in the southernmost counties.

GOLDEN-CROWNED KINGLET

Regulus regulus satrapa Lichtenstein

DESCRIPTION.—Size very small, one of our smallest birds; tail somewhat forked. *Male:* Center of crown red-orange, bordered with yellow which sometimes conceals the orange, and with black; line above eye whitish; rest of upperparts olive-gray; wings with an indistinct bar; tail and rump with greenish edgings; underparts pale gray, washed with olive and dull yellowish. *Length:* 4 inches.

RANGE IN PENNSYLVANIA.—A common migrant and winter resident from about the first of October to the end of April. It has been known to nest in the higher mountains but it is exceedingly rare as a summer bird.



Golden-crowned Kinglet
Ruby-crowned Kinglet

of *chips*. Golden-crowns like to hunt for food in coniferous trees.

RUBY-CROWNED KINGLET

Corthylio calendula calendula (Linnaeus)

DESCRIPTION.—Size very small; tail somewhat forked. *Adult male:* Grayish olive above, grayest on head, greenest on rump; crown with brilliant red patch which is sometimes concealed; wings with two indistinct bars; underparts soiled white, washed with faint yellowish and olive. *Length:* 4½ inches.

RANGE IN PENNSYLVANIA.—A migrant, usually common, from mid-April to mid-May, and from mid-September to latter October.

The song of the tiny Ruby-crown is amazingly loud and brilliant, and as the little creature sings, it may lift and fan out its startling crest. It is usually to be found in small trees or thickets, where it flits about, snapping up insects, and it often comes close at hand, when its bright eyes have a staring quality. Occasionally, it flicks its wings. Its alarm-note may be written *chü-dah*, rapidly given.

BLUE-GRAY GNATCATCHER

Polioptila cærulea cærulea (Linnæus)

DESCRIPTION.—Size very small, with long tail and short wings. *Male*: Upperparts blue-gray, a line across forehead and above eye white, bordered above by narrow black line; central tail-feathers black, the outer ones white; underparts soiled whitish. *Female*: Similar, the black of the head duller or missing. *Length*: 4½ inches.

RANGE IN PENNSYLVANIA.—A rather local summer resident in southern counties.

NEST.—A beautifully made structure of fur, plant-fibers, and bark, covered with lichens and dried flower petals, held in place with cobwebs, from 15 to 40 feet from the ground on a horizontal branch. *Eggs*: 3 to 5, pale blue, rather heavily spotted with brown.

This dainty little creature is restless; his tail wags or shakes almost constantly as he pursues insects. His usual cry is a complaining *new, new*, whined as he hops about among the foliage. Both birds assist in covering the nest with lichens, which they gather from nearby tree-trunks, and which they bind into the structure with cobwebs so that it is firm and neat. The male may, at times, be rather noisy about the family secrets, and if we patiently watch him as he flits through the branches, he may lead us to the nest.



Blue-gray
Gnatcatcher

WOOD THRUSH

Hylocichla mustelina (Gmelin)

DESCRIPTION.—Smaller than Robin. Rich brown above, brightest on head and neck, with noticeable whitish eye-ring; below white, marked all over with round black spots; eyes large, very dark brown. *Length*: 8 inches.

RANGE IN PENNSYLVANIA.—Common migrant and summer resident from about the first of May to October. It is not found in dense hemlock woods in the wilder districts, nor at higher altitudes.

NEST.—A firm, neat cup of grasses, weed-stalks, paper, string, and leaves, lined with finer materials, with an inner wall of mud, placed from 5 to 20 feet from the ground in a tree. *Eggs*: 3 or 4, pale blue, much like those of the Robin in color, but smaller.

This is the largest, brightest, and most strikingly marked of our thrushes, and he is the only one whose underparts are marked all over with round black spots.



Wood Thrush

The Wood Thrush lives in shady lawns as well as in wilder woodlands. He is often a familiar dooryard bird, hopping about on the grass or singing from a low perch. The song is delivered in sections, with pauses of a few seconds between. Some of the notes are rich and deep; others are high and flute-like; others tremble like a twanged banjo string. The alarm-note is loud and sharp.

WILSON'S THRUSH; VEERY

Hylocichla fuscescens fuscescens (Stephens)

DESCRIPTION.—Smaller than Robin. Uniform brown above; throat and belly white; sides of throat and breast washed with buffy, and marked with indistinct rows of short, brown streaks; sides white, faintly washed with gray-brown; eye-ring not noticeable in field. *Length:* 7½ inches.

RANGE IN PENNSYLVANIA.—A common migrant throughout in later April and May and in September. Nests in the more northerly counties and in the mountains. It is common as a summer resident in suitable damp woodlands.

NEST.—On the ground, made largely of leaves, lined with rootlets and small grasses. *Eggs:* 3 or 4, delicate greenish blue.

Go to a wooded swamp or to low, thick woodlands to find this elusive bird. If you keep quiet for a time, you may see his brown back as he flashes through the undergrowth. Make a slight disturbance, and he may call *zeu* in a penetrating tone. He may sing his remarkable ringing song which, in liquid, tinkling, descending spirals, sounds a little like *veery, veery, veery, veery*. If you become familiar with him, you will see him hopping over the ground like a Wood Thrush; he snaps up an insect here and there, or flops the damp leaves over looking for food.

GRAY-CHEEKED THRUSH

Hylocichla minima aliciae (Baird)

DESCRIPTION.—Upperparts olive, unmarked, not even a whitish eye-ring being noticeable in the field; *sides of head dull grayish*; sides of throat and breast faintly washed with buff, the breast marked with a few dark streaks, which lie in rows; throat and belly white; sides gray. *Length:* 7½ inches.

RANGE IN PENNSYLVANIA.—A regular migrant, though not often recorded, during May and in late September and early October.

This bird is difficult to identify in Pennsylvania. It does not often sing, and it is shy. Probably it is commoner than we suppose, but the thrushes look so much alike that we are afraid to record the species unless we have a specimen in hand. It resembles most closely the Olive-backed Thrush; it differs in having a dull whitish eye-ring and grayish cheeks, which in the Olive-back are distinctly buffy. Records of this species should be made with a good glass. The song, which may occasionally be given here, is like a Veery's.

OLIVE-BACKED THRUSH

Hylocichla ustulata swainsoni (Tschudi)

DESCRIPTION.—Upperparts olive; *eye-ring and sides of head buffy*, the color spreading more or less over the face, throat, and breast; throat streaked and breast somewhat spotted with blackish; belly white; sides grayish. *Length:* A little over 7 inches.

RANGE IN PENNSYLVANIA.—An abundant migrant in late April and early May and in September and October; rare as a summer resident, found only at high altitudes in the mountains.

NEST.—Deeply cupped, compact, and neat, of grasses, moss, rootlets, and twigs, placed in a forest tree from 6 to 20 feet from the ground. *Eggs:* 3 or 4, pale blue, spotted or blotched with red-brown.

The Olive-back's song is a little like the Wood Thrush's, but is longer, and it usually ascends the scale, in this respect differing from the Veery's. Its buffy eye-ring is usually a dependable field-mark. The alarm-note may be written *pert*, pronounced in front of the teeth.



Olive-backed Thrush

HERMIT THRUSH

Hylocichla guttata faxoni Bangs and Penard

DESCRIPTION.—Upperparts olive-brown, with a somewhat noticeable buffy eye-ring, and a *noticeably red-brown tail*, which is the most dependable field-mark; throat and breast washed with buffy, the breast marked with rows of short, blackish, rounded streaks; belly white; sides grayish brown. *Length:* A little over 7 inches.

RANGE IN PENNSYLVANIA.—A common migrant, appearing early in spring often during March, and remaining late in fall, often until November or even Christmas; it is casual in winter. As a nesting bird it is rather rare, occurring in the northern counties and at high altitudes.

NEST.—Usually on the ground, of leaves, rootlets, grasses, and moss, lined with finer materials. *Eggs:* 3 or 4, greenish blue.

The Hermit Thrush's red-brown tail is usually a good field-mark because it shows plainly, even as the bird flies away. It should not be confused with the Fox Sparrow, however, which has a brown back and bright red-brown tail, and which, curiously enough, occurs as an early spring, or late fall migrant, at about the same time as the Hermit Thrush.

The song of the Hermit Thrush is thought by some to be the highest point attained in American bird-music. It may be described as an elaborated and refined Wood Thrush song, given in deliberate, easy manner, often in the evening, and sometimes virtually at nightfall.

ROBIN

Turdus migratorius migratorius Linnæus

DESCRIPTION.—*Adult male*: Head blackish; partial white eye-ring; rest of upperparts gray, darker on wings and tail; outer tail-feathers narrowly tipped with white; throat white, streaked with black; breast and sides brownish red, sometimes somewhat barred with whitish; belly and under-tail-coverts white, the latter sometimes marked with grayish. Eyes dark brown. *Female*: Duller. *Young*: The breasts are spotted with black. *Length*: 10 inches.



Robin

RANGE IN PENNSYLVANIA.—Abundant migrant and summer resident, appearing early in spring, sometimes in February or March, and lingering often until November; casual in winter, when it is likely to be seen in flocks.

NEST.—A firm, neatly cupped structure of grasses, weed stalks, string, and so forth, with an inner lining of mud, placed in trees, on window-sills, under porches, and sometimes on the ground.

Eggs: 3 or 4, pale blue.

The quiet, homelike beauty of the Robin appeals to every American. As the trim bird runs about the dew-drenched lawn, he seems to impart to us his own belief in the goodness of life. He pauses to listen for an earthworm as it scratches its way along its dark tunnel; but if he does not catch the worm, he looks up brightly, runs nimbly a few feet further on, and listens again, firm in his knowledge that he will sooner or later come into his own and catch a worm perhaps even longer than the one he missed. The spotted breasts of the young bespeak kinship with the thrushes.

BLUEBIRD

Sialis sialis sialis (Linnæus)

DESCRIPTION.—A little larger than an English Sparrow. *Adult male*: Rich, deep, glossy blue above; throat, breast, and sides reddish brown; belly and under tail-coverts white. *Female*: Similar, but upperparts largely gray, bluest on wings and tail. *Young*: Similar to female, but with spotted breast. *Length*: 6 inches.

RANGE IN PENNSYLVANIA.—A common migrant and summer resident from early March until November; casual in winter. It is to be found chiefly in more cultivated districts.

NEST.—Of grasses, in a cavity in a tree or bird-box, from 5 to 20 feet from the ground.

The soft, brief warble of the Bluebird in spring, and the gentle farewell it sings in the fall as it flies over, are to be classed among the



Bluebird

sweetest of bird music, to my way of thinking. The Bluebird is not only beautiful in song and in color, but it is decidedly beneficial, and since it rears two or three broods of young a year, when it can, it destroys much insect life in feeding the hungry young which eat proportionately more than their parents.

The Bluebird's interesting habit of lifting its wing after alighting, or as it sings, is characteristic.

INDEX

In the following list only common bird names are given. Beginners will find it desirable to trace the accurate name of a bird through the use of this list.

- Acadian Flycatcher, 90.
- Alder Flycatcher (figured p. 90), 91.
- American Bittern (figured), 32.
- American Crossbill (figured p. 106), 105.
- American Eagle. See Eagle, Bald.
- American Egret, 35.
- American Merganser. See Merganser.
- American Peregrine. See Hawk, Duck.
- American Scaup. See Scaup.
- American Scoter (figured), 28.
- American Widgeon. See Baldpate.
- Ant-bird. See Flicker, Northern.
- Arctic Owl. See Owl, Snowy.
- Bachman's Sparrow, 116.
- Baird's Sandpiper, 43.
- Bald Eagle (figured p. 65), 64.
- Baldpate (figured), 20.
- Baltimore Oriole, 101.
- Bank Swallow (figured p. 121), 123.
- Barn Owl (figured), 69.
- Barn Swallow (figured p. 121), 122.
- Barred Owl (figured), 72.
- Barrow's Goldeneye, 27.
- Bartramian Sandpiper (figured), 47.
- Bay-breasted Warbler (figured), 137.
- Bay-winged Bunting. See Sparrow, Vesper.
- Bee-bird. See Kingbird.
- Bee-Martin. See Kingbird.
- Belted Kingfisher (figured), 77.
- Bewick's Wren (figured), 150.
- Big Owl. See Owl, Great Horned.
- Birch Partridge. See Grouse, Ruffed.
- Bird Hawk. See Hawk, Sharp-shinned.
- Bittern, American (figured), 32.
- Bull. See Heron, Black-crowned Night.
- Green. See Heron, Green.
- Least (figured), 33.
- Black and White Creeper. See Warbler, Black and White.
- Black and White Creeping Warbler. See Warbler, Black and White.
- Black and White Warbler (figured), 129.
- Black-bellied Plover, 49.
- Black-billed Cuckoo (figured), 76.
- Blackbird. See Grackle, Purple and Bronzed; Starling; Cowbird; Blackbird, Rusty and Red-winged.
- Blackbird, Cow. See Cowbird.
- Crow. See Grackle, Purple and Bronzed.
- Red-winged (figured p. 99), 98.
- Rusty, 102.
- Swamp. See Blackbird, Red-winged.
- Blackburnian Warbler (figured), 138.
- Black-cap, Wilson's. See Warbler, Wilson's.
- Black-capped Chickadee (figured), 155.
- Black-capped Warbler. See Warbler, Wilson's.
- Black-crowned Night Heron (figured p. 37), 36.
- Black Duck (figured), 19.
- Black-eyed Owl. See Owl, Barred.
- Black-head. See Scaup and Lesser Scaup; Duck, Ring-necked.
- Black Mallard. See Duck, Black.
- Black-poll Warbler (figured p. 138), 137.
- Black Rail, 39.
- Black Sparrow. See Starling.
- Black Tern (figured), 15.
- Black-throated Blue Warbler (figured), 134.
- Black-throated Bunting, 120.
- Black-throated Green Warbler (figured), 139.
- Black Woodpecker. See Woodpecker, Pileated.
- Blue-bill. See Scaup; Scaup, Lesser; Duck, Ring-necked.
- Bluebird (figured), 160.
- Blue Darter. See Hawk, Sharp-shinned, and Cooper's.
- Blue-gray Gnatcatcher (figured), 157.
- Blue Grosbeak, 120.
- Blue Hawk. See Hawk, Duck.
- Blue-headed Vireo (figured), 128.
- Blue Jay (figured p. 93), 92.
- Blue-winged Teal (figured), 21.
- Blue-winged Warbler (figured), 130.
- Blue-winged Yellow Warbler. See Warbler, Blue-winged.
- Blue Yellow-backed Warbler (figured), 132.
- Bobolink (figured), 96.
- Bob-White (figured), 52.
- Bog Owl. See Owl, Short-eared.
- Bog Snipe. See Woodcock.
- Bohemian Waxwing, 125.
- Bonaparte's Gull, 14.
- Brant, 31.
- Brewster's Warbler, 131.
- Bridge Bird. See Phoebe.
- Broad-winged Hawk, 63.
- Bronzed Grackle, 102.
- Brown Creeper (figured), 153.
- Brown Thrasher (figured), 149.
- Brown Thrush. See Thrasher, Brown.
- Bufflehead (figured), 27.
- Bull-Bat. See Nighthawk.
- Bull Bittern. See Heron, Black-crowned Night.
- Bullet Hawk. See Hawk, Duck.
- Bullhead. See Duck, Ruddy.
- Bullock. See Duck, Ruddy.
- Bum Cluck. See Bittern, American.
- Bunting, Bay-winged. See Sparrow, Vesper.
- Black-throated, 120.
- Indigo (figured), 119.
- Snow, 109.
- Yellow-winged. See Sparrow, Grass-hopper.
- Butcher Bird. See Shrike, Northern and Migrant.
- Butterball. See Bufflehead; Duck, Ruddy.
- Buzzard. See Vulture, Turkey.
- Buzzard, Turkey. See Vulture, Turkey.
- Canada Goose (figured), 30.
- Canadian Warbler (figured), 146.
- Canary, Wild. See Goldfinch; Warbler, Yellow.
- Canvasback (figured), 25.
- Cape May Warbler (figured), 133.
- Cardinal (figured), 118.

- Cardinal, Virginia. See Cardinal.
 Cardinal Grosbeak. See Cardinal.
 Carolina Chickadee, 156.
 Carolina Dove. See Dove, Mourning.
 Carolina Rail. See Rail, Sora.
 Carolina Wren (figured), 150.
 Caspian Tern, 15.
 Catbird (figured p. 149), 148.
 Cat Owl. See Owl, Great Horned and Long-eared.
 Cedar Bird. See Waxwing, Cedar.
 Cedar Owl. See Owl, Long-eared.
 Cedar Waxwing (figured), 124.
 Cerulean Warbler (figured), 136.
 Chat, Yellow-breasted (figured), 145.
 Chebec. See Flycatcher, Least.
 Cherry Bird. See Waxwing, Cedar.
 Chestnut-sided Warbler (figured p. 137), 136.
 Chewink. See Towhee.
 Chickadee, Black-capped (figured), 155. Carolina, 156.
 Chicken Hawk. See Hawk, Marsh, Sharp-shinned, Cooper's, Red-tailed, Red-shouldered, Broad-winged, Rough-legged; and Goshawk.
 Chimney Swallow. See Swift, Chimney.
 Chimney Swift (figured), 85.
 Chipping Sparrow (figured), 113.
 Chippy. See Sparrow, Chipping.
 Chiv. See Woodpecker, Red-bellied.
 Clape. See Flicker, Northern.
 Cliff Swallow (figured p. 121), 122.
 Cock o' the Woods. See Woodpecker, Pileated.
 Common Tern (figured p. 15), 14.
 Connecticut Warbler (figured), 143.
 Cooper's Hawk (figured), 59.
 Coot (figured), 40.
 Cormorant, Double-crested (figured p. 16), 15.
 Cow Blackbird. See Cowbird.
 Cowbird (figured p. 98), 97.
 Crane. See Heron, Great Blue.
 Fish. See Heron, Great Blue.
 Sandhill. See Heron, Great Blue.
 White. See Egret, American; Heron, Little Blue.
 Creeper, Black and White. See Warbler, Black and White.
 Brown (figured), 153.
 Crested Flycatcher (figured), 87.
 Crossbill, American (figured p. 106), 105.
 Red (figured p. 106), 105.
 White-winged (figured p. 106), 105.
 Crow, 94.
 Fish, 95.
 Rain-. See Cuckoo, Yellow-billed and Black-billed; Dove, Mourning.
 Crow Blackbird. See Grackle, Purple and Bronzed.
 Cuckoo, Black-billed (figured), 76.
 Yellow-billed (figured p. 76), 75.
 Cuphead. See Goldeneye.
 Dabchick. See Grebe, Pied-billed.
 Darter, Blue. See Hawk, Sharp-shinned, and Cooper's.
 Dickeissel, 120.
 Dipper. See Grebe, Horned and Pied-billed.
 Dipper Duck. See Grebe, Pied-billed and Horned; Duck, Ruddy; Bufflehead.
 Diver, Great Northern. See Loon.
 Double-crested Cormorant (figured p. 16), 15.
 Dove, Carolina. See Dove, Mourning.
 Mourning (figured), 55.
 Turtle. See Dove, Mourning.
 Dowitcher, 42.
 Downy Woodpecker, 78.
 Duck, Baldpate (figured), 20.
 Barrow's Goldeneye, 27.
 Black (figured), 19.
 Blue-winged Teal (figured), 21.
 Bufflehead (figured), 27.
 Canvasback (figured), 25.
 Dipper. See Bufflehead; Duck, Ruddy.
 Fish. See Merganser, and Mergansers, Red-breasted and Hooded.
 Gadwall (figured p. 20), 19.
 Goldeneye (figured), 26.
 Gray. See Gadwall.
 Green-winged Teal (figured), 26.
 Lesser Scaup, 26.
 Long-tailed. See Old Squaw.
 Mallard (figured), 18.
 Old Squaw (figured p. 28), 27.
 Pintail (figured p. 23), 22.
 Raft. See Scaup; Scaup, Lesser; Duck, Ring-necked.
 Redhead (figured), 24.
 Red-legged Black, 19.
 Ring-necked, 26.
 Ruddy (figured p. 30), 29.
 Scaup (figured), 25.
 Shoveler (figured), 22.
 Spoonbill. See Shoveler.
 Wild. See Mallard.
 Wood (figured), 23.
 Duck Hawk (figured p. 66), 65.
 Dusky Mallard. See Duck, Black.
 Eagle, American. See Eagle, Bald.
 Bald (figured p. 65), 64.
 Golden, 64.
 White-headed. See Eagle, Bald.
 Eaves Swallow (figured p. 121), 122.
 Egret. See Egret, American.
 American, 35.
 English Pheasant. See Pheasant, Ring-necked.
 English Snipe. See Snipe, Wilson's.
 English Sparrow, 108.
 European Gray Partridge, 52.
 European Widgeon, 21.
 Evening Grosbeak (figured), 103.
 Falcon, Peregrine. See Hawk, Duck.
 Field Lark. See Meadowlark.
 Field Plover. See Sandpiper, Bartramian.
 Field Sparrow (figured p. 113), 114.
 Finch, Grass. See Sparrow, Vesper.
 Pine. See Siskin, Pine.
 Purple (figured), 104.
 Fish Crane. See Heron, Great Blue.
 Fish Crow, 95.
 Fish Duck. See Merganser; Merganser, Red-breasted and Hooded.
 Fish Hawk (figured), 68.
 Flicker, Northern (figured p. 83), 82.
 Florida Gallinule (figured), 39.
 Flycatcher, Acadian, 90.
 Alder (figured p. 90), 91.
 Created (figured), 87.
 Least (figured p. 90), 91.

- Flycatcher, Olive-sided (figured p. 87), 88.
 Tyrant. See Kingbird.
 Yellow-bellied (figured), 90.
- Fly-up-the-Creek. See Heron, Green.
 Fox Sparrow (figured), 116.
- Gadwall (figured p. 20), 19.
 Gallinule, Florida (figured), 39.
 Gnatcatcher, Blue-gray (figured), 157.
 Gnatsucker. See Nighthawk.
 Golden-crowned Kinglet (figured), 156.
 Golden Eagle, 64.
 Goldeneye (figured), 26.
 Barrow's, 27.
 Golden Owl. See Owl, Barn.
 Golden Plover, 50.
 Golden Robin. See Oriole, Baltimore.
 Golden-winged Warbler (figured p. 130), 131.
 Golden-winged Woodpecker. See Flicker,
 Northern.
- Goldfinch (figured p. 107), 106.
 Goosander. See Merganser.
 Goose, Canada (figured), 30.
 Greater Snow, 31.
 White-fronted, 31.
 Wild. See Goose, Canada.
 Goshawk (figured p. 60), 59.
 Grackle, Bronzed, 102.
 Purple (figured p. 103), 102.
 Grass Finch. See Sparrow, Vesper.
 Grasshopper Sparrow (figured p. 111), 110
 Grass Sparrow. See Sparrow, Vesper.
 Gray-cheeked Thrush, 158.
 Gray Duck. See Gadwall.
 Gray Gull. See Herring Gull.
 Gray Hawk. See Goshawk.
 Gray Mallard. See Mallard.
 Gray Owl. See Owl, Screech.
 Gray Partridge. See Grouse, Ruffed.
 Great Blue Heron (figured), 34.
 Great Horned Owl (figured), 74.
 Great Northern Diver. See Loon.
 Greater Scaup. See Scaup.
 Greater Snow Goose, 31.
 Greater Yellow-legs (figured), 45.
 Grebe, Holbœll's, 11.
 Horned (figured), 11.
 Pied-billed (figured p. 12), 11.
 Green Bittern. See Heron, Green.
 Green Heron (figured), 36.
 Green-winged Teal (figured), 21.
 Grosbeak, Blue, 120.
 Cardinal. See Cardinal.
 Evening (figured), 103.
 Pine (figured p. 103), 104.
 Rose-breasted (figured), 119.
 Ground Robin. See Towhee.
 Ground Sparrow. See Sparrow, Song and
 Vesper.
 Ground Woodpecker. See Flicker, Northern.
 Grouse, Ruffed (figured), 53.
 Guffee. See Towhee.
 Gull, Bonaparte's, 14.
 Gray. See Herring Gull.
 Herring (figured), 13.
 Laughing, 14.
 Ring-billed, 13, 14.
 Sea. See Herring Gull.
- Hairy Woodpecker (figured), 78.
 Hammer, Yellow. See Flicker, Northern.
 Hang-bird. See Oriole, Baltimore.
 Hang-nest. See Oriole, Baltimore.
- Harrier, Hen. See Hawk, Marsh.
 Marsh. See Hawk, Marsh.
 Hawk, Bird. See Hawk, Sharp-shinned.
 Blue. See Hawk, Duck.
 Broad-winged, 63.
 Bullet. See Hawk, Duck.
 Chicken. See Hawk, Marsh, Sharp-
 shinned, Cooper's, Red-tailed, Red-
 shouldered, Broad-winged, Rough-
 legged; Goshawk.
 Cooper's (figured), 59.
 Duck (figured p. 66), 65.
 Fish (figured), 68.
 Gray. See Goshawk.
 Hen. See Hawk, Cooper's, and Red-
 tailed; Goshawk.
 Killy. See Hawk, Sparrow.
 Ledge. See Hawk, Duck.
 Marsh (figured), 57.
 Mosquito. See Nighthawk.
 Mouse. See Hawk, Sparrow.
 Partridge. See Goshawk.
 Pigeon (figured p. 67), 66. See also
 Hawk, Marsh, Sharp-shinned, Cooper's,
 Broad-winged, and Sparrow.
 Red-shouldered (figured p. 61), 62.
 Red-tailed (figured p. 61), 60.
 Rock. See Hawk, Duck.
 Rough-legged, 63.
 Sharp-shinned (figured p. 59), 58.
 Sparrow (figured), 67.
 Squirrel. See Goshawk.
 Swamp. See Hawk, Marsh.
 Hell-Diver. See Grebe, Horned and Pied-
 billed.
 Henslow's Sparrow (figured), 111.
 Hen Harrier. See Hawk, Marsh.
 Hen Hawk. See Hawk, Cooper's and
 Red-tailed, and Goshawk.
 Hen, Indian. See Woodpecker, Pileated.
 Hermit Thrush, 159.
 Heron, Black-crowned Night (figured
 p. 37), 36.
 Great Blue (figured), 34.
 Green (figured), 36.
 Little Blue, 35.
 White. See Heron, Little Blue.
 Herring Gull (figured), 13.
 High-hole. See Flicker, Northern.
 Holbœll's Grebe, 11.
 Honker. See Goose, Canada.
 Hooded Merganser (figured p. 18), 17.
 Hooded Warbler (figured p. 146), 145.
 Hoot Owl. See Owl, Barred, Screech,
 Great Horned, and Long-eared.
 Horned Grebe (figured), 11.
 Horned Lark, 91.
 House Sparrow. See Sparrow, English.
 House Wren (figured p. 151), 150.
 Hummer. See Hummingbird, Ruby-
 throated.
 Hummingbird, Ruby-throated (figured), 86.
 Hungarian Partridge, 52.
- Indian Hen. See Woodpecker, Pileated.
 Indigo Bunting (figured), 119.
- Jack Snipe. See Snipe, Wilson's.
 Jay, Blue (figured p. 93), 92.
 Jenny Wren. See Wren, House.
 Joree. See Towhee.
 Junco. See Junco, Slate-colored.
 Slate-colored (figured), 114.

- Kentucky Warbler (figured), 143.
 Killdeer. See Killdeer.
 Killdeer (figured), 49.
 Killdeer Plover. See Killdeer.
 Killy Hawk. See Hawk, Sparrow.
 King Rail, 37.
 Kingbird (figured p. 87), 86.
 Kingfisher, Belted (figured), 77.
 Kinglet, Golden-crowned (figured), 156.
 Ruby-crowned (figured), 156.
 Knot, 43.
- Ladder-back. See Woodpecker, Red-bellied.
 Lapland Longspur, 109.
 Lark, Field. See Meadowlark.
 Horned, 91.
 Prairie Horned (figured p. 92), 91.
 Shore. See Lark, Prairie Horned.
 Tit (figured p. 148), 147.
- Laughing Gull, 14.
 Lawrence's Warbler, 131.
 Least Bittern (figured), 33.
 Least Flycatcher (figured p. 90), 91.
 Least Sandpiper (figured), 44.
 Ledge Hawk. See Hawk, Duck.
 Lesser Scaup, 26.
 Lesser Yellow-legs, 46.
 Linnet. See Finch, Purple.
 Little Blue Heron, 35.
 Little Owl. See Owl, Screech.
 Log-cock. See Woodpecker, Pileated.
 Long-billed Marsh Wren (figured), 152.
 Long-eared Owl (figured), 70.
 Long-tailed Duck. See Old Squaw.
 Longspur, Lapland, 109.
 Loom. See Loon.
 Loon (figured), 12.
 Red-throated, 13.
 Louisiana Water-Thrush, 142.
- Magnolia Warbler (figured p. 136), 135.
 Mallard (figured), 18.
 Black. See Duck, Black.
 Dusky. See Duck, Black.
 Gray. See Mallard.
 Marsh Harrier. See Hawk, Marsh.
 Marsh Hawk (figured), 57.
 Marsh Owl. See Owl, Short-eared.
 Marsh Tern. See Tern, Black.
 Martin, Purple (figured), 121.
 Sand. See Swallow, Bank.
 Maryland Yellow-throat (figured), 144.
 Meadowlark (figured p. 100), 99.
 Meadow Owl. See Owl, Short-eared.
 Meadow Peep. See Sandpiper, Least.
 Merganser (figured), 16.
 American. See Merganser.
 Hooded (figured p. 18), 17.
 Red-breasted (figured), 17.
 Migrant Shrike (figured), 126.
 Mocker of the North. See Thrasher, Brown.
 Mockingbird (figured), 148.
 Monkey-faced Owl. See Owl, Barn.
 Mosquito Hawk. See Nighthawk.
 Mottled Owl. See Owl, Screech.
 Mourning Dove (figured), 55.
 Mourning Warbler (figured p. 143), 144.
 Mouse Hawk. See Hawk, Sparrow.
 Mud Hen. See Gallinule, Florida and Coot.
 Mud Teal. See Teal, Green-winged.
 Myrtle Warbler (figured p. 134), 135.
- Nashville Warbler (figured), 131.
 Nelson's Sparrow, 111.
 Nighthawk (figured), 84.
 Night Jar. See Nighthawk.
 Northern Flicker (figured p. 83), 82.
 Northern Raven (figured), 94.
 Northern Shrike (figured), 125.
 Northern Water-Thrush (figured), 142.
 Northern Waxwing, 125.
 Nuthatch, Red-breasted (figured p. 153), 154.
 White-breasted (figured), 153.
- Old Squaw (figured p. 28), 27.
 Old Wife. See Old Squaw.
 Olive-backed Thrush (figured), 159.
 Olive-sided Flycatcher (figured p. 87), 88.
 Orange-crowned Warbler (figured p. 131), 132.
 Orchard Bird. See Oriole, Orchard.
 Orchard Oriole (figured p. 101), 100.
 Oriole, Baltimore, 101.
 Orchard (figured p. 101), 100.
 Orlotan. See Rail, Sora.
 Osprey (figured), 68.
 Ovenbird (figured), 141.
 Owl, Barn (figured), 69.
 Barred (figured), 72.
 Big. See Owl, Great Horned.
 Black-eyed. See Owl, Barred.
 Bog. See Owl, Short-eared.
 Cat. See Owl, Great Horned and Long-eared.
 Cedar. See Owl, Long-eared.
 Golden. See Owl, Barn.
 Gray. See Owl, Screech.
 Great Horned (figured), 74.
 Hoot. See Owl, Barred, Screech, Great Horned, and Long-eared.
 Little. See Owl, Screech.
 Long-eared (figured), 70.
 Marsh. See Owl, Short-eared.
 Meadow. See Owl, Short-eared.
 Monkey-faced. See Owl, Barn.
 Mottled. See Owl, Screech.
 Red. See Owl, Screech.
 Saw-whet (figured), 73.
 Screech (figured), 73.
 Short-eared (figured p. 70), 71.
 Snow. See Owl, Snowy.
 Snowy, 75.
 Squeak. See Owl, Screech.
 Squinch. See Owl, Screech.
 Swamp. See Owl, Short-eared.
 White. See Owl, Snowy.
 Oxyeye. See Sandpiper, Pectoral, and Least.
- Palm Warbler (figured), 140.
 Partridge. See Bob-White and Grouse, Ruffed.
 Birch. See Grouse, Ruffed.
 European Gray, 52.
 Gray. See Grouse, Ruffed.
 Hungarian, 52.
 Virginia. See Bob-White.
 Partridge Hawk. See Goshawk.
 Parula Warbler (figured), 132.
 Peabody-bird. See Sparrow, White-throated.
 Pectoral Sandpiper, 43.
 Peep. See Sandpiper, Spotted.
 Meadow. See Sandpiper, Least.

- Pelican, White, 16.
 Peregrine, American. See Hawk, Duck.
 Peregrine Falcon. See Hawk, Duck.
 Pewee. See Phoebe.
 Wood (figured p. 88), 89.
 Pheasant. See Pheasant, Ring-necked, and Grouse, Ruffed.
 English. See Pheasant, Ring-necked.
 Ring-necked (figured), 51.
 Philadelphia Vireo, 127.
 Phoebe (figured), 88.
 Phoebe-bird. See Phoebe.
 Pied-billed Grebe (figured p. 12), 11.
 Pigeon Hawk (figured p. 67), 66. See also Hawk, Marsh, Sharp-shinned, Cooper's, Broad-winged, and Sparrow.
 Pileated Woodpecker (figured), 80.
 Pine Finch. See Siskin, Pine.
 Pine Grosbeak (figured p. 103), 104.
 Pine Siskin (figured p. 108), 107.
 Pine Warbler (figured), 139.
 Pintail (figured p. 23), 22.
 Piping Plover, 50.
 Pipit (figured p. 148), 147.
 Plickah. See Flicker, Northern.
 Plover, Black-bellied, 49.
 Field. See Sandpiper, Bartramian.
 Golden, 50.
 Killdeer. See Killdeer.
 Piping, 50.
 Ring. See Plover, Semipalmated.
 Semipalmated (figured), 50.
 Upland. See Sandpiper, Bartramian.
 Plum Pudd'n. See Bittern, American.
 Prairie Horned Lark (figured p. 92), 91.
 Prairie Warbler (figured p. 140), 141.
 Prairie Whistler. See Sandpiper, Bartramian.
 Preacher Bird. See Vireo, Red-eyed.
 Prothonotary Warbler, 129.
 Purple Finch (figured), 104.
 Purple Grackle (figured p. 103), 102.
 Purple Martin (figured), 121.
- Quail. See Bob-White.
 Quawk. See Heron, Black-crowned Night.
- Raft Duck. See Scaup; Scaup, Lesser; Duck, Ring-necked.
 Rail, Black, 39.
 Carolina. See Rail, Sora.
 King, 37.
 Sora (figured p. 39), 38.
 Virginia (figured), 38.
 Yellow, 39.
- Rain-Crow. See Cuckoo, Yellow-billed and Black-billed; Dove, Mourning.
 Raven, Northern (figured), 94.
 Red-backed Sandpiper (figured), 44.
 Red-bellied Woodpecker (figured p. 83), 82.
- Redbird. See Cardinal.
 Redbird, Virginia. See Cardinal.
 Red-breasted Merganser (figured), 17.
 Red-breasted Nuthatch (figured p. 153), 154.
 Red Crossbill (figured p. 106), 105.
 Red-eyed Vireo (figured), 127.
 Redhead (figured), 24.
 See also Woodpecker, Red-headed.
 Red-headed Woodpecker (figured), 81.
 See also Woodpecker, Pileated.
- Red-legged Black Duck, 19.
 Red Owl. See Owl, Screech.
 Redpoll (figured), 106.
 Red-shouldered Hawk (figured p. 61), 62.
 Redstart (figured p. 146), 147.
 Red-tailed Hawk (figured p. 61), 60.
 Red-throated Loon, 13.
 Redwing. See Blackbird, Red-winged.
 Red-winged Blackbird (figured p. 99), 98.
 Reedbird. See Bobolink; Blackbird, Red-winged; Rail, Sora.
 Ricebird. See Bobolink.
 Ring-billed Gull, 13, 14.
 Ring-neck. See Pheasant, Ring-necked.
 Ring-necked Duck, 26.
 Ring-necked Pheasant (figured), 51.
 Ring Plover. See Plover, Semipalmated.
 Road Sparrow. See Sparrow, Vesper.
 Robin (figured), 160.
 Golden. See Oriole, Baltimore.
 Ground. See Towhee.
 Swamp. See Towhee.
 Wake. See Flicker, Northern.
 Robin Snipe, 43.
 Rock Hawk. See Hawk, Duck.
 Rose-breasted Grosbeak (figured), 119.
 Rough-legged Hawk, 63.
 Rough-winged Swallow (figured p. 121), 124.
 Ruby-crowned Kinglet (figured), 156.
 Ruby-throat. See Hummingbird, Ruby-throated.
 Ruby-throated Hummingbird (figured), 86.
 Ruddy Duck (figured p. 30), 29.
 Ruddy Turnstone, 50.
 Ruffed Grouse (figured), 53.
 Rusty Blackbird, 102.
- Salad Bird. See Goldfinch.
 Sanderling, 45.
 Sandhill Crane. See Heron, Great Blue.
 Sand Martin. See Swallow, Bank.
 Sandpiper, Baird's, 43.
 Bartramian (figured), 47.
 Least (figured), 44.
 Pectoral, 43.
 Red-backed (figured), 44.
 Semipalmated, 45.
 Solitary (figured), 46.
 Spotted (figured), 48.
 White-rumped, 43.
- Sapsucker. See Woodpecker, Hairy, Downy, and Red-bellied; Sapsucker, Yellow-bellied.
 Yellow-bellied (figured), 79.
 Savannah Sparrow (figured p. 109), 110.
 Sawbill. See Merganser.
 Saw-whet Owl (figured), 73.
 Scarlet Tanager (figured), 120.
 Scaup (figured), 25.
 American. See Scaup.
 Greater. See Scaup.
 Lesser, 26.
- Scooter, American (figured), 28.
 Surf (figured), 29.
 White-winged (figured), 29.
- Screech Owl (figured), 73.
 Sea Gull. See Herring Gull.
 Sea Swallow. See Tern, Common.
 Semipalmated Plover (figured), 50.
 Semipalmated Sandpiper, 45.
 Shag. See Cormorant, Double-crested.
 Sharp-shinned Hawk (figured p. 59), 58.

- Sheldrake. See Merganser, Red-breasted and Hooded.
 Shite-poke. See Heron, Green.
 Shore Lark. See Lark, Prairie Horned.
 Short-billed Marsh Wren (figured), 152.
 Short-eared Owl (figured p. 70), 71.
 Shoveler (figured), 22.
 Shrike, Migrant (figured), 126.
 Northern (figured), 125.
 Silver-tail. See Grouse, Ruffed.
 Siskin, Pine (figured p. 108), 107.
 Skunkbird. See Bobolink.
 Slate-colored Junco (figured), 114.
 Snipe, Bog. See Woodcock.
 English. See Wilson's Snipe.
 Jack. See Snipe, Wilson's.
 Robin, 43.
 Wall-eyed. See Woodcock.
 Wilson's (figured p. 42), 41.
 Yellow-legs. See Yellow-legs, Greater.
 Snow-bird. See Junco, Slate-colored, and Bunting, Snow.
 Snow Bunting, 109.
 Snowflake. See Bunting, Snow.
 Snow Owl. See Owl, Snowy.
 Snowy Owl, 75.
 Solitary Sandpiper (figured), 46.
 Song Sparrow (figured), 115.
 Sora Rail (figured p. 39), 38.
 Sou' Southerly. See Old Squaw.
 Sparrow, Bachman's, 116.
 Black. See Starling.
 Chipping (figured), 113.
 English, 108.
 Field (figured p. 113), 114.
 Fox (figured), 116.
 Grass. See Sparrow, Vesper.
 Grasshopper (figured p. 111), 110.
 Ground. See Sparrow, Song and Vesper Henslow's (figured), 111.
 House. See Sparrow, English.
 Nelson's, 111.
 Road. See Sparrow, Vesper.
 Savannah (figured p. 109), 110.
 Song (figured), 115.
 Swamp (figured p. 115), 116.
 Tree (figured p. 113), 112.
 Vesper (figured), 109.
 White-crowned (figured 112), 111.
 White-throated (figured), 112.
 Yellow-winged. See Sparrow, Grass-hopper.
 Sparrow Hawk (figured), 67.
 Spike-tail. See Pintail.
 Spoonbill Duck. See Shoveler.
 Spotted Sandpiper (figured), 48.
 Sprig. See Pintail.
 Sprig-tail. See Pintail.
 Squeal Owl. See Owl, Screech.
 Squinch Owl. See Owl, Screech.
 Squirrel Hawk. See Goshawk.
 Starling (figured), 95.
 Stake-driver. See Bittern, American.
 Stilt Sandpiper, 43.
 Striker. See Tern, Common.
 Summer Yellow Bird. See Warbler, Yellow.
 Summer Yellow-legs. See Yellow-legs, Lesser.
 Surf Scoter (figured), 29.
 Swallow, Bank (figured p. 121), 123.
 Barn (figured p. 121), 122.
 Chimney. See Swift, Chimney.
 Swallow, Cliff (figured p. 121), 122.
 Eaves (figured p. 121), 122.
 Rough-winged (figured p. 121), 124.
 Sea. See Tern, Common.
 Tree (figured p. 121), 123.
 White-bellied (figured p. 121), 123.
 Swamp Blackbird. See Blackbird, Red-winged.
 Swamp Hawk. See Hawk, Marsh.
 Swamp Owl. See Owl, Short-eared.
 Swamp Robin. See Towhee.
 Swamp Sparrow (figured p. 115), 116.
 Swan, Trumpeter, 32.
 Swan, Whistling, 31.
 Swift, Chimney (figured), 85.
 Tanager, Scarlet (figured), 120.
 Teakettle Bird. See Wren, Carolina.
 Teal, Blue-winged (figured), 21.
 Green-winged (figured), 21.
 Mud. See Teal, Green-winged.
 Tennessee Warbler (figured), 132.
 Tern, Black (figured), 15.
 Caspian, 15.
 Common (figured p. 15), 14.
 Marsh. See Tern, Black.
 Wilson's. See Tern, Common.
 Thistle Bird. See Goldfinch.
 Thrasher, Brown (figured), 149.
 Thrush, Brown. See Thrasher, Brown.
 Gray-cheeked, 158.
 Hermit, 159.
 Olive-backed (figured), 159.
 Water-, Louisiana, 142.
 Water-, Northern (figured), 142.
 Wilson's, 158.
 Wood (figured), 157.
 Thunder-pump. See Bittern, American.
 Tilt-up. See Sandpiper, Spotted.
 Tip-up. See Sandpiper, Spotted.
 Titlark (figured p. 148), 147.
 Titmouse, Tufted (figured p. 155), 154.
 Towhee (figured), 117.
 Tree Sparrow (figured p. 113), 112.
 Tree Swallow (figured p. 121), 123.
 Trumpeter Swan, 32.
 Tufted Titmouse (figured p. 155), 154.
 Turkey Buzzard. See Vulture, Turkey.
 Turkey Vulture (figured), 56.
 Turkey, Wild, 54.
 Turnstone, Ruddy, 50.
 Turtle Dove. See Dove, Mourning.
 Tyrant Flycatcher. See Kingbird.
 Upland Plover. See Sandpiper, Bartramian.
 Veery, 158.
 Vesper Sparrow (figured), 109.
 Vireo, Blue-headed (figured), 128.
 Philadelphia, 127.
 Red-eyed (figured), 127.
 Warbling (figured), 127.
 White-eyed, 128.
 Yellow-throated (figured), 128.
 Virginia Cardinal. See Cardinal.
 Virginia Partridge. See Bob-White.
 Virginia Rail (figured), 38.
 Virginia Redbird. See Cardinal.
 Vulture, Turkey (figured), 56.
 Wake Robin. See Flicker, Northern.
 Wall-eyed Snipe. See Woodcock.

- Warbler, Bay-breasted (figured), 137.
 Black and White (figured), 129.
 Black and White Creeping. See Warbler, Black and White.
 Warbler, Blackburnian (figured), 133.
 Black-capped. See Warbler, Wilson's.
 Black-poll (figured p. 138), 137.
 Black-throated Blue (figured), 134.
 Black-throated Green (figured), 139.
 Blue-winged (figured), 130.
 Blue-winged Yellow. See Warbler, Blue-winged.
 Blue Yellow-backed (figured), 132.
 Brewster's, 131.
 Canadian (figured), 146.
 Cape May (figured), 133.
 Cerulean (figured), 136.
 Chestnut-sided (figured p. 137), 136.
 Connecticut (figured), 143.
 Golden-winged (figured p. 130), 131.
 Hooded (figured p. 146), 145.
 Kentucky (figured), 143.
 Lawrence's, 131.
 Magnolia (figured p. 136), 135.
 Mourning (figured p. 143), 144.
 Myrtle (figured p. 134), 135.
 Nashville (figured), 131.
 Orange-crowned (figured p. 131), 132.
 Palm (figured), 140.
 Parula (figured), 132.
 Pine (figured), 139.
 Prairie (figured p. 140), 141.
 Prothonotary, 129.
 Tennessee (figured), 132.
 Wilson's (figured), 146.
 Worm-eating (figured p. 129), 130.
 Yellow (figured), 133.
 Yellow Palm, 140.
 Yellow-rumped (figured p. 134), 135.
 Yellow-throated, 129.
 Warbling Vireo (figured), 127.
 Water-Thrush, Louisiana, 142.
 Northern (figured), 142.
 Waxwing, Bohemian, 125.
 Cedar (figured), 124.
 Northern, 125.
 Western Willet, 47.
 Whip-poor-will (figured p. 84), 83. See also Nighthawk.
 Whistler, Prairie. See Sandpiper, Bartramian.
 Whistler. See Goldeneye.
 Whistling Swan, 31.
 White-bellied Swallow (figured p. 121), 123.
 White-breasted Nuthatch (figured), 153.
 White Chan. See Egret, American; Heron, Little Blue.
 White-crowned Sparrow (figured 112), 111.
 White-eyed Vireo, 128.
 White-fronted Goose, 31.
 White-headed Eagle. See Eagle, Bald.
 White Heron. See Heron, Little Blue.
 White Owl. See Owl, Snowy.
 White Pelican, 16.
 White-rumped Sandpiper, 43.
 White-throated Sparrow (figured), 112.
 White-winged Crossbill (figured p. 106), 105.
 White-winged Scoter (figured), 29.
 Wickup. See Flicker, Northern.
 Widgeon. See Baldpate.
 Widgeon, American. See Baldpate.
- Widgeon, European, 21.
 Wild Canary. See Warbler, Yellow; Goldfinch.
 Wild Duck. See Mallard.
 Wild Goose. See Goose, Canada.
 Wild Turkey, 54.
 Willet, 47.
 Western, 47.
 Wilson's Black-cap. See Warbler, Wilson's.
 Wilson's Snipe (figured p. 42), 41.
 Wilson's Tern. See Tern, Common.
 Wilson's Thrush, 158.
 Wilson's Warbler (figured), 146.
 Winter Wren (figured), 151.
 Woodcock. See Woodpecker, Pileated.
 Woodcock (figured p. 41), 40.
 Wood Duck (figured), 23.
 Wood Pewee (figured p. 88), 89.
 Wood Thrush (figured), 157.
 Woodpecker, Black. See Woodpecker, Pileated.
 Downy, 78.
 Golden-winged. See Flicker, Northern.
 Ground. See Flicker, Northern.
 Hairy (figured), 78.
 Pileated (figured), 80.
 Red-bellied (figured p. 83), 82.
 Red-headed (figured), 81. See also Woodpecker, Pileated.
 Yellow-bellied. See Sapsucker, Yellow-bellied.
 Zebra. See Woodpecker, Red-bellied.
 Worm-eating Warbler (figured p. 129), 130.
 Wren, Bewick's (figured), 150.
 Carolina (figured), 150.
 House (figured p. 151), 150.
 Jenny. See Wren, House.
 Long-billed Marsh (figured), 152.
 Short-billed Marsh (figured), 152.
 Winter (figured), 151.
- Yarrup. See Flicker, Northern.
 Yellow-bellied Flycatcher (figured), 90.
 Yellow-bellied Sapsucker (figured), 79.
 Yellow-bellied Woodpecker. See Sapsucker, Yellow-bellied.
 Yellow-billed Cuckoo (figured p. 76), 75.
 Yellow Bird. See Goldfinch.
 Yellow Bird, Summer. See Warbler, Yellow.
 Yellow-breasted Chat (figured), 145.
 Yellow Hammer. See Flicker, Northern.
 Yellow-legs. See Yellow-legs, Lesser.
 Greater (figured), 45. Lesser, 46.
 Summer. See Yellow-legs, Lesser.
 Yellow-legs Snipe. See Yellow-legs, Greater.
 Yellow Palm Warbler, 140.
 Yellow Rail, 39.
 Yellow-rumped Warbler (figured p. 134), 135.
 Yellow-throat, Maryland (figured), 144.
 Yellow-throated Vireo (figured), 128.
 Yellow-throated Warbler, 129.
 Yellow Warbler (figured), 133.
 Yellow-winged Bunting. See Sparrow, Grasshopper.
 Yellow-winged Sparrow. See Sparrow, Grasshopper.
- Zebra Woodpecker. See Woodpecker, Red-bellied.

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